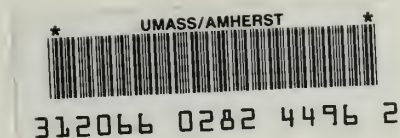


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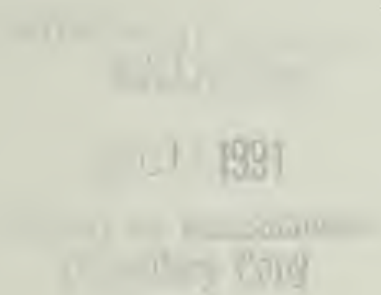


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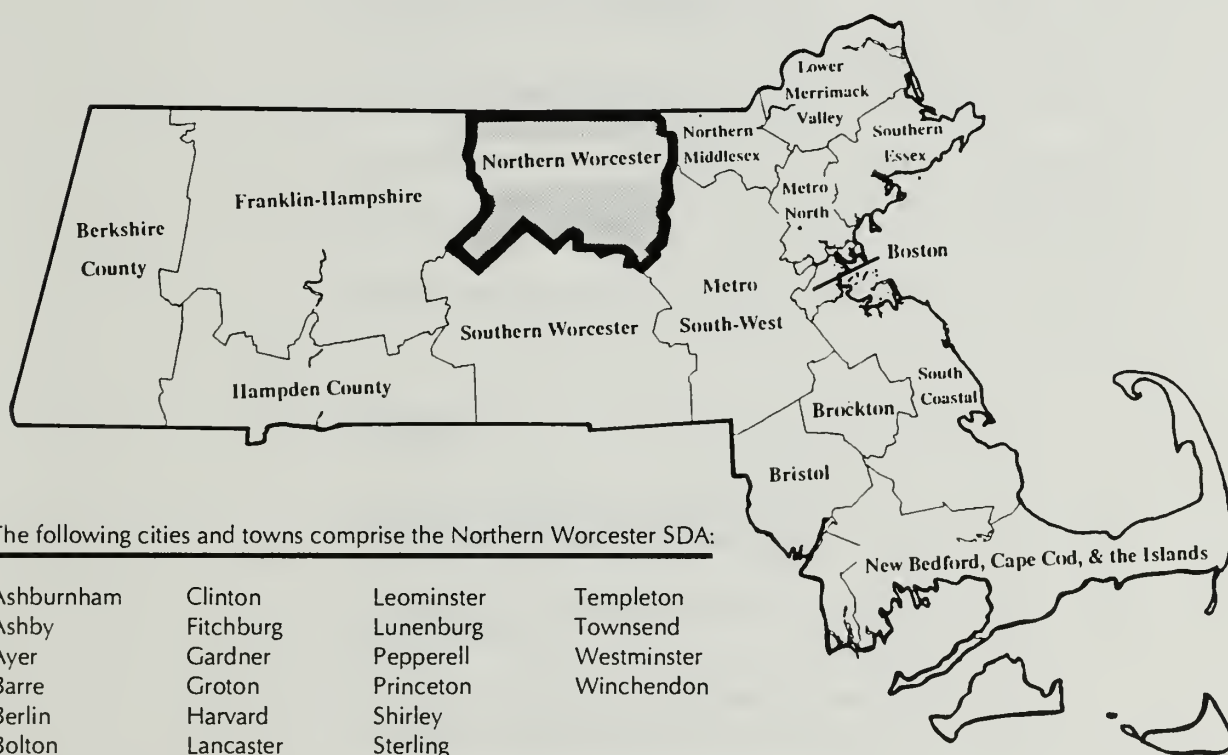


Massachusetts Service Delivery Area Job Market Reports: **The Northern Worcester SDA**



93/75

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Introduction: the SDA Job Market Reports

This report analyzes the economies and job markets of the Commonwealth's 15 Service Delivery Areas between 1984 and 1990. It examines the kind of jobs that local areas generated or lost over the period, the industries that make up the area, the average earnings of workers, the level of unemployment and education in the workforce, and the distribution of jobs by occupation.

This report provides an overview of the emerging economic forces changing the job market. Data on local area population, labor force, employment, unemployment, job growth, wages, and income are included as well as information on how to interpret and use the data.

This report also analyzes the occupational staffing patterns of local economies, publishing for the first time, a detailed occupational employment data base by SDA. Labor leaders, educators, human resource specialists, and Regional Employment Boards can use this data to:

study the geographical movement of jobs and workers within the state to relate the location and number of workers by occupation to demand.

assess and analyze the occupational composition of jobs and skill requirements within areas.

There are 15 Service Delivery Areas in Massachusetts, each profiled in a separate report. Each report, however, contains an overview of the economic growth in all service delivery areas. Refer to the appendix for a listing of the cities and towns comprising a service delivery area.

Service Delivery Areas were established under the provisions of the 1983 federal Job Training Partnership Act, to tailor the Commonwealth's employment and training programs to the needs of citizens in local areas. Some service delivery areas consist of a single county; others are comprised of two or more counties. The Boston Service Delivery Area is the only single-city SDA, while others cross county lines.

plan and design education and training programs

How to Interpret the Job Market and Use the Reports

This report is divided into two sections. Section I summarizes the changes in population, employment and unemployment in all 15 Service Delivery Areas, highlighting the geographic concentration of jobs by industry and occupation. Section II profiles the respective service delivery area and presents a detailed series of tables on the area's occupations and industries.

Table A in Section II lists the number of jobs by occupation and provides the percent distribution of the jobs within the area, highlighting the diverse occupational structure of the SDA. Occupations are grouped by skill level to allow comparisons of similar or related occupations.

Table B in Section II lists the industries where jobs are found in major occupations. Finally, Table C presents the number and type of jobs found in major industries in the local economy. Industries are defined in terms of the Standard Industrial Classification (SIC) system. A detailed description of the SIC, including industry definitions is contained in

the *Standard Industrial Classification Manual, 1972* and the *1977 Supplement*.

How to Use the Data

The following sections briefly outline how to interpret and use the data.

Population

Population trends provide a measure of an area's economic stability. If an area has high unemployment and is losing its economic base, a decline in employment usually results in an eventual decrease in population and income. The opposite is generally true in areas with fast growing economies. The more jobs an area generates, the more people move into the area to seek employment. Population growth, however, can occur independently of employment in certain areas, particularly if the region is a retirement community.

Population changes from natural increases, the difference in the number of births and deaths, and migration, are identified in Table I.

The 1980 and 1988 population estimates are from the Bureau of the Census. Natural increases are derived from the Massachusetts Department of Public Health's estimates of births and deaths. Net migration estimates are derived by subtracting the total net change in population from the natural increase.

Labor Force

The size and characteristics of the labor force determine the number and type of people competing for jobs. Changes in educational requirements, the size of the labor force, and the age structure affect employment opportunities.

Table I lists the total number of persons in the labor force, i.e., those that are either employed or unemployed. This count is residually-based and includes self-employed and unpaid family workers in addition to wage and salary workers.

Growth vs. Number of Jobs

When assessing an area's economic viability, it is important to distinguish between an area's rate of job creation and the number of jobs generated. Even though an area has a fast rate of job growth it may generate fewer numbers of jobs than slow growing areas. For example, the Brockton Service Delivery Area had the second fastest job growth rate, but generated only 4.7 percent of the Commonwealth's jobs. Many of these jobs were low paying and decreased the area's percentage share of total state wages. By comparison, the city of Boston was the slowest growing area, with job growth averaging 0.7 percent per year. Nevertheless, because of its size it generated 7.6 percent of the state's jobs.

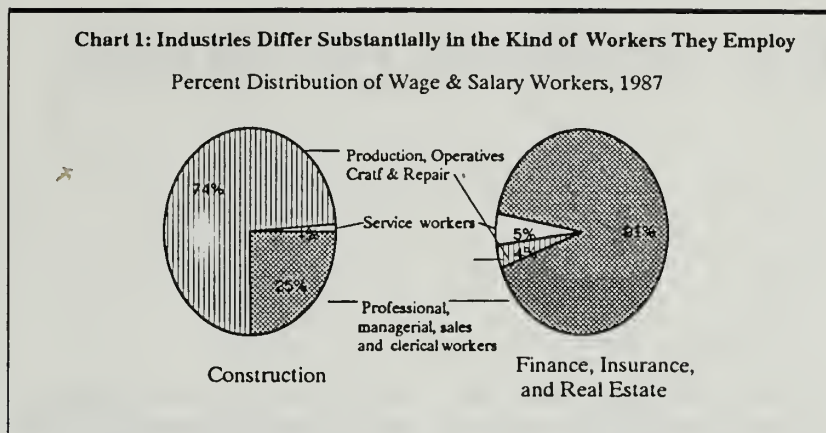
The industry employment data shown in Table 2 is compiled through the Department of Employment and

Training's Employment and Wage program. Employment in this context is the count of all persons on the payroll of establishments subject to the Massachusetts Employment Security Law. Employment data were not adjusted to account for such factors as noneconomic coding changes, Standard Industrial Classification code changes, or changes in the multi-location employer reporting. However, since the data are confined to SDAs and large industries and sectors, comparisons of broad economic trends can be made.

Distribution of Jobs by Industry and Occupation

The number of jobs in an SDA depends in large part on the demand for goods and services produced by the area's industries. The growth or decline of an industry, however, has varying effects on individual occupations because industries employ different types of workers. Growth of manufacturing industries, for example, would tend to increase the employment of engineers, technicians and machine operators. In contrast, growth in the finance, insurance, and real estate industries would likely increase the employment of economists, financial analysts and sales and clerical workers.

The distribution of jobs by occupation in Tables 3, A, B and C is based on 1987 data collected by the Occupational Employment Statistics (OES) program, a Federal-State cooperative program. The OES data show how different industries, and different firms in the same industry employ workers in various skills. Over time the data can provide insights into how jobs are affected by technical advances, foreign competition, and shifts in the demand for goods and services.



Occupational staffing patterns are based on 1987 data. Over the short-term, occupational staffing patterns are not significantly affected by changes in the job market. Over the long-term, however, staffing patterns are affected by changes in technology and the number of new workers.

Occupational staffing pattern data were obtained for all industries, except for workers employed in agriculture, private households and the federal government. The industries covered in these tables thus account for 97 percent of all wage and salary workers.

Average Annual Wages

Average wage data give a comparative measure of how well jobs pay in specific areas and industries. The data, compiled through the Employment and Wage program, approximates an average annual wage by area and industry. It is computed by dividing total wages by the total number of workers employed.

Annual pay data only approximate annual earnings because an individual may not be employed by the same employer all year, or may work for more than one employer. Annual pay is also affected by the ratio of full-time to part-time workers as well as the number of individuals in

high paying and low paying occupations. Industries characterized by high numbers of part-time workers, such as retail trade, show wage levels appreciably below other industries. The opposite effect characterizes industries with low percentages of part-time workers, or industries which typically have heavy overtime work. Average annual wage data may also be influenced by work stoppages, bonus and retroactive pay, and seasonal factors.

Average wages are computed by place of work. Therefore, the earnings of commuters who reside in one area and work in another, are counted in the area of employment.

Per Capita Income

Per capita income data give a comparative measure of the income of people living in the area versus wage data which reflect earnings of workers who are employed in the area but do not live there. It is computed by dividing total personal income, the sum of earned income from all sources, by the population. Total personal income includes wages and salaries, interest, dividends, and rents, social security etc. Data on per capita income is provided for counties only. It is included to give a more comprehensive picture of an area's economic well-being.

Overview:

Job Trends in the SDAs

The Massachusetts economy performed well between 1984 and 1988. Job growth averaged 2.4 percent per year and average annual wages rose 31.1 percent to \$24,150. (In terms of 1982-84 constant dollars wages rose 15.2 percent.) Unemployment stood at 3.3 percent, a level so low that some economists believed Massachusetts had reached full employment. In 1989 Massachusetts employment growth leveled off. Unemployment inched up to 4.0 percent, but it still ranked Massachu-

setts with one of the lowest jobless rates of the 11 large states. In 1990, however, the industries that generated the bulk of the jobs--construction, services, retail trade, finance, insurance and real estate--declined. Unemployment was up 50 percent from 1989, averaging 189,000 workers or 6.0 percent. Massachusetts' unemployment rate is now higher than the nation's, averaging 9.2 percent (287,000 unemployed workers) during first quarter 1991.

Much of the employment in Massachusetts is concentrated in relatively few metropolitan areas. During the eighties, however, the state's job growth was diversified, as the city of Boston recorded the slowest growth rate of the 15 SDA's. But what areas generated the most jobs between 1984 and 1989? What areas had fast growing economies, low levels of unemployment, and high wages? What areas lost the most manufacturing jobs during the period? Which recorded the highest rates of unemployment in 1990? The following tables show the trends that highlight the answers to these questions.

Population Growth

Table I identifies the SDAs that increased or decreased in population over the decade. It highlights the factors underlying population changes--the natural increase, or the net difference between the number of births and deaths that occurred

Table 1: Changes in Population, Employment, and Unemployment by Service Delivery Area
(Data based on residential counts)

| | Berkshire County | Franklin Hampshire | Hampden County | Northern Worcester | Southern Worcester | Northern Middlesex | Lower Merrimack | Southern Essex |
|---------------------------------|---------------------|-----------------------|-------------------|-----------------------|-----------------------|-----------------------|--------------------|-------------------|
| 1980 Population ⁽¹⁾ | 145,110 | 216,696 | 443,018 | 208,324 | 454,116 | 226,991 | 260,893 | 372,795 |
| 1988 Population ⁽¹⁾ | 138,720 | 224,420 | 449,950 | 225,650 | 471,300 | 244,320 | 279,100 | 375,180 |
| Natural Increase ⁽²⁾ | 2,014 | 6,631 | 17,123 | 13,861 | 18,521 | 16,186 | 14,825 | 11,202 |
| Net Migration ⁽³⁾ | (8,404) | 1,093 | (10,191) | 3,465 | (1,337) | 1,143 | 3,382 | (8,817) |
| Total Net Change | (6,690) | 7,724 | 6,932 | 17,326 | 17,183 | 17,329 | 18,207 | 2,385 |
| 1988 | | | | | | | | |
| Civilian Workforce | 72,490 | 119,780 | 216,530 | 108,550 | 245,820 | 142,600 | 137,570 | 216,270 |
| Employed | 69,330 | 116,120 | 209,170 | 104,800 | 237,880 | 137,780 | 132,040 | 208,960 |
| Unemployed | 3,170 | 3,670 | 7,370 | 3,750 | 7,940 | 4,820 | 5,540 | 7,310 |
| Unemployment Rate | 4.4 | 3.1 | 3.4 | 3.5 | 3.2 | 3.4 | 4.0 | 3.4 |
| 1989 | | | | | | | | |
| Civilian Workforce | 73,250 | 121,250 | 217,710 | 108,280 | 247,670 | 143,600 | 138,880 | 220,170 |
| Employed | 70,040 | 116,730 | 208,650 | 103,270 | 237,390 | 137,170 | 131,620 | 211,910 |
| Unemployed | 3,210 | 4,520 | 9,070 | 5,020 | 10,280 | 6,430 | 7,260 | 8,260 |
| Unemployment Rate | 4.4 | 3.7 | 4.2 | 4.6 | 4.2 | 4.5 | 5.2 | 3.8 |
| 1990 | | | | | | | | |
| Civilian Workforce | 74,040 | 123,530 | 218,520 | 107,020 | 245,550 | 139,780 | 136,640 | 220,380 |
| Employed | 69,450 | 116,940 | 205,410 | 99,090 | 229,430 | 130,300 | 126,380 | 208,360 |
| Unemployed | 4,590 | 6,590 | 13,120 | 7,940 | 16,120 | 9,480 | 10,250 | 12,020 |
| Unemployment Rate | 6.2 | 5.3 | 6.0 | 7.4 | 6.6 | 6.8 | 7.5 | 5.5 |

(1) Estimates from the Bureau of the Census

(2) Derived from Mass. Dept. of Public Health's estimates of births & deaths

(3) Derived by subtracting total net change from natural increase

between 1980 and 1988; and the net migration, the number of residents that moved in or out of the area.

Statewide Population Growth

Most of the population growth in Massachusetts from 1980 to 1988 has been entirely driven by natural increases as opposed to increases in the number of people moving into the state. From 1970 to 1980 Massachusetts' population expanded less than one percent; from 1980 to 1989, it grew 3 percent, slightly faster than the last 10 years. This growth, however, is still well below the 8.7 percent national average. Several factors explain Massachusetts' slow population growth.

While births have declined throughout the nation, the decline is more pronounced in Massachusetts. From 1960 to 1985, live births in Massachusetts declined 27 percent while nationally, live births declined 12 percent.



Migration out of Massachusetts has been substantial. From 1970 to 1980, 263,000 people left the state. Although the economy improved in the 1980s, Massachusetts still had a net out-migration of 66,800 people between 1980 and 1988.

Population Growth by SDA

Population changes among the SDAs varied. Population increased in 13 SDAs and declined in two. All SDAs had natural population increases, but only 5 SDAs—New Bedford, Cape Cod and the Islands, Northern Worcester,

| Metro North | City of Boston | Metro South/West | South Coastal | Brockton | Bristol | New Bedford Cape & Islands | State of Massachusetts |
|-------------|----------------|------------------|---------------|----------|---------|----------------------------|------------------------|
| 725,993 | 562,994 | 797,325 | 453,042 | 212,705 | 304,053 | 353,041 | 5,737,096 |
| 705,680 | 577,830 | 808,700 | 467,410 | 216,640 | 311,600 | 393,200 | 5,889,700 |
| 15,891 | 26,362 | 28,788 | 15,854 | 13,766 | 13,217 | 5,213 | 219,454 |
| (36,204) | (11,526) | (17,413) | (1,486) | (9,831) | (5,670) | 34,946 | (66,794) |
| (20,313) | 14,836 | 11,375 | 14,368 | 3,935 | 7,547 | 40,159 | 152,603 |
| 396,940 | 302,660 | 464,570 | 248,250 | 115,820 | 159,210 | 207,470 | 3,155,000 |
| 385,960 | 292,340 | 454,110 | 240,640 | 111,570 | 152,370 | 198,270 | 3,052,000 |
| 10,980 | 10,330 | 10,470 | 7,610 | 4,250 | 6,830 | 9,200 | 103,000 |
| 2.8 | 3.4 | 2.3 | 3.1 | 3.7 | 4.3 | 4.4 | 3.3 |
| 399,080 | 304,160 | 466,910 | 250,080 | 117,250 | 162,310 | 209,190 | 3,180,000 |
| 385,830 | 292,240 | 454,010 | 240,570 | 111,810 | 153,590 | 198,130 | 3,053,000 |
| 13,250 | 11,920 | 12,900 | 9,500 | 5,440 | 8,720 | 11,070 | 127,000 |
| 3.3 | 3.9 | 2.8 | 3.8 | 4.6 | 5.4 | 5.3 | 4.0 |
| 397,070 | 302,530 | 462,940 | 250,000 | 116,820 | 162,050 | 209,250 | 3,166,000 |
| 377,300 | 285,790 | 443,990 | 235,230 | 108,550 | 148,350 | 192,340 | 2,977,000 |
| 19,780 | 16,740 | 18,960 | 14,780 | 8,270 | 13,700 | 16,900 | 189,000 |
| 5.0 | 5.5 | 4.1 | 5.9 | 7.1 | 8.5 | 8.1 | 6.0 |

Table 2: Job Growth in Service Delivery Areas by Sector, 1984-1989 *(Data based on Number of Jobs in Area)*

| | Berkshire County | Franklin Hampshire | Hampden County | Northern Worcester | Southern Worcester | Northern Middlesex | Lower Merrimack | Southern Essex |
|----------------------------------|---------------------|-----------------------|-------------------|-----------------------|-----------------------|-----------------------|--------------------|-------------------|
| Avg Annual Percent Change | | | | | | | | |
| Total, all Industries | 1.7 | 2.8 | 1.9 | 1.7 | 3.0 | 1.8 | 1.8 | 1.4 |
| Construction | 13.0 | 10.8 | 8.5 | 7.8 | 7.1 | 5.1 | 5.3 | 5.7 |
| Manufacturing | -3.1 | -2.3 | -2.8 | -3.3 | -1.0 | -2.6 | -2.1 | -3.6 |
| Communications/Utilities | 3.9 | 2.6 | 4.2 | 2.7 | 3.8 | 8.2 | 2.2 | 4.7 |
| Wholesale Trade | -4.3 | 8.8 | 1.7 | 9.6 | 5.5 | 8.8 | 2.7 | 3.8 |
| Retail Trade | 2.7 | 4.5 | 3.0 | 3.3 | 3.6 | 2.1 | 2.7 | 1.1 |
| Banks, Ins. & Real Estate | 0.3 | 8.7 | 3.2 | 5.1 | 6.0 | 5.6 | 3.5 | 5.2 |
| Services | 4.5 | 4.5 | 4.0 | 5.6 | 5.3 | 6.9 | 5.6 | 4.8 |
| Government | 1.8 | 1.0 | 2.2 | 2.2 | 2.2 | 2.0 | 3.5 | 2.2 |
| Net Change, 1984-1989 | | | | | | | | |
| Total, all Industries | 5,000 | 10,380 | 18,070 | 6,510 | 30,680 | 8,420 | 9,980 | 11,100 |
| Construction | 1,770 | 1,420 | 2,530 | 1,030 | 2,430 | 840 | 940 | 1,520 |
| Manufacturing | (2,480) | (1,670) | (6,550) | (4,130) | (2,650) | (4,850) | (4,750) | (6,700) |
| Communications/Utilities | 320 | 300 | 1,640 | 330 | 1,630 | 1,280 | 420 | 1,010 |
| Wholesale Trade | (450) | 850 | 740 | 1,190 | 3,330 | 1,450 | 710 | 1,370 |
| Retail Trade | 1,690 | 3,300 | 5,710 | 2,190 | 6,880 | 1,770 | 2,330 | 2,170 |
| Banks, Ins. & Real Estate | 20 | 990 | 2,060 | 560 | 3,470 | 770 | 790 | 1,620 |
| Services | 3,550 | 4,150 | 8,590 | 3,810 | 12,560 | 5,750 | 6,750 | 8,150 |
| Government | 530 | 820 | 3,100 | 1,300 | 2,520 | 1,120 | 2,470 | 2,050 |
| Percent Change, 1984-1989 | | | | | | | | |
| Total, all Industries | 8.6 | 14.6 | 9.7 | 9.0 | 16.0 | 9.0 | 8.8 | 7.5 |
| Construction | 81.6 | 62.7 | 46.9 | 37.0 | 34.8 | 24.4 | 25.9 | 30.2 |
| Manufacturing | -14.7 | -11.0 | -13.3 | -15.4 | -5.0 | -12.4 | -10.6 | -17.0 |
| Communications/Utilities | 20.4 | 13.8 | 22.6 | 13.2 | 20.2 | 40.5 | 10.0 | 25.5 |
| Wholesale Trade | -22.4 | 51.0 | 7.7 | 56.7 | 30.2 | 50.8 | 14.1 | 20.7 |
| Retail Trade | 13.8 | 24.3 | 16.1 | 17.6 | 19.4 | 10.9 | 14.1 | 5.7 |
| Banks, Ins. & Real Estate | 1.0 | 47.8 | 16.9 | 27.3 | 32.7 | 28.0 | 18.5 | 28.7 |
| Services | 24.2 | 24.3 | 21.6 | 30.8 | 29.3 | 39.1 | 31.1 | 26.3 |
| Government | 9.4 | 5.0 | 11.7 | 11.6 | 11.2 | 10.5 | 18.6 | 11.6 |

Lower Merrimack Valley, Northern Middlesex, and Franklin-Hampshire--had net in-migration.

Table 1 shows that New Bedford, Cape Cod and the Islands gained the most population over the decade, while Metro North and Berkshire County lost population. There are a number of reasons for population changes. One is that people move out of areas with weak job markets to where the jobs are. In Berkshire County and Metro North, job growth underperformed that of the state. But in New Bedford, Cape Cod and the Islands population growth primarily resulted from 34,946 people moving into the area. The area's economic boom, quality of life, and lower cost of living attracted them

to seek employment or retire. The characteristics of this SDA therefore make economic analysis of the employment growth to population growth relationship more difficult.

A Note on Population Counts

At the time of this writing, 1990 Census data were not available. Some preliminary figures have since become available, showing a faster rate of growth between 1988 and 1990. Differences in the statewide rate of growth from 1980-1988 and 1980-1990, appear to be less than two tenths of a percentage point on an annualized basis. On an SDA basis, differences in the rate of change between the two figures appear to be most significant for only Bristol, Franklin-Hampshire, Metro North,

and Southern Worcester. However, population counts for 1990 are preliminary and are subject to possible correction for undercounts or overcounts. The U.S. Department of Commerce is considering whether to correct these counts and will publish corrected ones if any, no later than July 15, 1991.

Labor Force and Employment

Table 1 also identifies the areas with the largest labor force and the most employment in 1988, 1989, and 1990. Some significant differences exist in the concept of employment. Because interurban commuting outside of many service delivery areas is common, residential and business growth often diverge. The data in table 1 are

| Metro North | City of Boston | Metro South-West | South Coastal | Brockton | Bristol | New Bedford Cape & Islands | State of Massachusetts |
|-------------|----------------|------------------|---------------|----------|---------|----------------------------|------------------------|
| 1.3 | 0.7 | 2.0 | 3.3 | 3.0 | 2.1 | 2.3 | 1.8 |
| 5.7 | 3.1 | 5.2 | 8.1 | 6.6 | 11.8 | 6.4 | 6.1 |
| -3.6 | -7.0 | -2.1 | -5.4 | -3.6 | -3.1 | -4.8 | -3.6 |
| 4.7 | -2.3 | 1.5 | 5.8 | 3.0 | 2.4 | 2.0 | 1.0 |
| 3.9 | -4.7 | 6.4 | 4.8 | 10.2 | 8.5 | 7.0 | 3.9 |
| 1.1 | -1.5 | 1.8 | 2.2 | 4.8 | 5.0 | 3.0 | 2.1 |
| 5.2 | 1.4 | 4.4 | 10.9 | 6.0 | 4.6 | 4.4 | 4.1 |
| 4.8 | 3.0 | 5.0 | 6.7 | 5.1 | 4.7 | 5.7 | 4.4 |
| 1.0 | 2.7 | 1.0 | 1.0 | 0.8 | 3.8 | 2.5 | 2.0 |
| | | | | | | | |
| 22,560 | 19,680 | 46,060 | 27,780 | 12,180 | 13,230 | 17,200 | 258,190 |
| 3,110 | 1,670 | 3,980 | 3,630 | 1,150 | 2,280 | 1,990 | 30,430 |
| (26,530) | (14,220) | (14,230) | (6,860) | (2,610) | (7,060) | (6,450) | (112,440) |
| (1,120) | (4,140) | 1,030 | 1,760 | 670 | 420 | 660 | 5,680 |
| 8,920 | (5,630) | 10,770 | 2,120 | 2,390 | 2,600 | 1,540 | 31,580 |
| 4,980 | (4,610) | 7,030 | 4,950 | 4,660 | 6,270 | 5,970 | 55,930 |
| 6,950 | 5,110 | 4,680 | 7,960 | 960 | 1,110 | 1,310 | 38,730 |
| 24,380 | 29,040 | 29,960 | 12,490 | 4,190 | 4,880 | 9,310 | 167,370 |
| 1,540 | 12,370 | 2,460 | 900 | 490 | 2,580 | 2,410 | 36,540 |
| | | | | | | | |
| 6.5 | 3.7 | 10.2 | 17.7 | 16.1 | 11.1 | 12.1 | 9.2 |
| 23.8 | 15.6 | 25.7 | 43.7 | 35.2 | 67.0 | 31.6 | 31.6 |
| -32.6 | 30.4 | -10.3 | -24.6 | -17.0 | -14.8 | -21.8 | -16.7 |
| 8.4 | -11.1 | 7.1 | 31.5 | 14.8 | 12.2 | 10.0 | 4.8 |
| 40.9 | -21.8 | 35.7 | 26.4 | 60.6 | 48.2 | 39.8 | 21.0 |
| 8.2 | -7.3 | 9.1 | 11.5 | 26.5 | 27.1 | 15.8 | 11.1 |
| 57.7 | 6.9 | 23.8 | 65.8 | 33.7 | 25.0 | 23.2 | 22.1 |
| 21.3 | 15.6 | 27.7 | 38.2 | 28.3 | 26.0 | 32.0 | 23.7 |
| 5.3 | 14.2 | 5.2 | 4.9 | 3.8 | 20.2 | 12.9 | 10.4 |

residentially based, so heavily populated areas usually have the largest labor force and employment. The data in tables 2, 3, and 4 are employer based. These tables represent employment changes in business establishments within an area.

Massachusetts' civilian labor force grew by 10.9 percent or by 313,000 between 1980 and 1989. Women accounted for 80.2 percent of the increase. Hurt by slow population growth, Massachusetts' labor force growth lagged behind the 15.8 percent national average growth rate recorded for the same period. In 1990, however, the Massachusetts labor force declined marginally to 3,166,000, a loss of 14,000 workers from 1989.

Over half of Massachusetts' labor force resided in 5 SDAs and more than a third lived in just three of these SDAs—Metro South-West, Metro North, and the City of Boston.

Metro South-West, the area bounded by Route 128 and Interstate 495, has the largest and most educated labor force in the state. In 1990 it accounted for approximately 15 percent of the state's labor force and employment. Metro North and the City of Boston, the second and third largest SDAs in terms of population and employment, accounted for 12.6 and 9.6 percent of Massachusetts employment, respectively.

South Coastal and Southern Worcester, the fourth and fifth largest SDAs,

each accounted for about 8 percent of Massachusetts' employment. Berkshire County, the state's smallest SDA in terms of population, labor force, and employment had only 2.3 percent of the state's employment.

Unemployment

Table I also shows the distribution of unemployment and the jobless rates among the 15 SDAs. Bristol, New Bedford, Cape Cod and the Islands, and Lower Merrimack Valley, areas with nondiversified economies, had among the highest rates of unemployment in the state in 1988, 1989, and 1990. In 1990, Bristol's and New Bedford, Cape Cod and the Island's jobless rate topped 8.0 percent. Despite problems in its high technology industries, Metro South-

Table 3: Distribution of Jobs in Service Delivery Areas by Industry & Occupation

| | Berkshre County | Franklin Hampshire | Hampden County | Northern Worcester | Southern Worcester | Northern Middlesex | Lower Merrimack | Southern Essex |
|----------------------------------|--------------------|-----------------------|-------------------|-----------------------|-----------------------|-----------------------|--------------------|-------------------|
| Industrial Distribution | | | | | | | | |
| Total Jobs | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Construction | 5.9 | 4.5 | 3.9 | 4.8 | 4.2 | 4.2 | 3.7 | 4.1 |
| Manufacturing | 22.9 | 16.6 | 20.8 | 29.0 | 22.8 | 33.8 | 32.4 | 20.4 |
| Communications/Utilities | 3.0 | 3.0 | 4.4 | 3.5 | 4.4 | 4.4 | 3.7 | 3.1 |
| Wholesale Trade | 2.5 | 3.1 | 5.0 | 4.2 | 6.5 | 4.2 | 4.7 | 5.0 |
| Retail Trade | 22.2 | 20.7 | 20.2 | 18.5 | 19.0 | 17.7 | 15.3 | 25.2 |
| Banks, Ins. & Real Estate | 4.0 | 3.8 | 7.0 | 3.3 | 6.3 | 3.4 | 4.1 | 4.5 |
| Services | 28.9 | 26.0 | 23.6 | 20.4 | 24.9 | 20.1 | 23.0 | 24.5 |
| Government | 9.9 | 21.2 | 14.5 | 15.9 | 11.3 | 11.5 | 12.7 | 12.3 |
| Occupational Distribution | | | | | | | | |
| Total, all Occupations | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Managerial & Executive | 8.8 | 8.7 | 7.7 | 8.6 | 8.6 | 9.0 | 8.0 | 8.6 |
| Prof. & Technical | 19.9 | 21.8 | 16.7 | 14.8 | 18.9 | 23.3 | 20.7 | 16.6 |
| Marketing & Sales | 12.0 | 10.6 | 13.7 | 11.5 | 12.6 | 13.1 | 9.8 | 14.0 |
| Clerical & Administrative | 14.8 | 15.2 | 17.3 | 15.3 | 18.0 | 16.8 | 16.6 | 16.6 |
| Service | 16.9 | 17.9 | 15.6 | 13.3 | 15.0 | 12.4 | 13.9 | 17.5 |
| Prod, Const Wkrs/Operators | 27.7 | 25.8 | 29.0 | 36.5 | 26.9 | 25.4 | 30.9 | 26.8 |

West continues to have the lowest unemployment rate in Massachusetts, helped along by a low population growth rate, about half that of the state.

Job Growth

Table 2 details the economic growth within each SDA over the 1984-1989 period. It identifies the average yearly change in industry employment levels among the SDAs, the number of jobs generated or lost by each industry over the 5 year period, and the percent change in industry employment levels between 1984 and 1989.

It is important to note that annual 1990 SDA job data are not available at the time of this writing. However, statewide job losses for 1990 totalled 125,700, the highest ever recorded. This downward trend is expected to continue well into 1991.

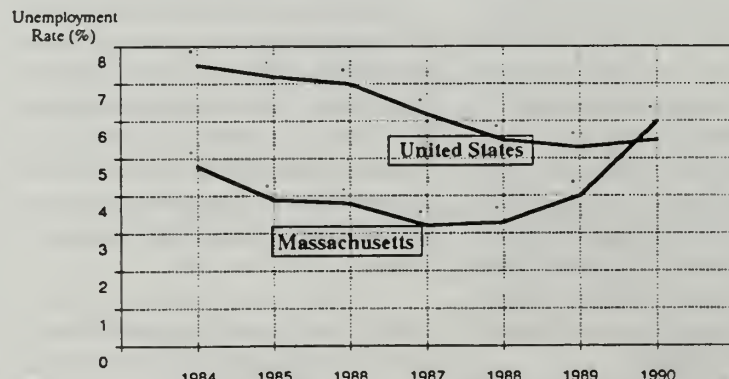
Metro South-West generated over 46,000 jobs, the most of any SDA between 1984 and 1989. South-

ern Worcester generated 30,680 jobs, the second largest number. This is significant because Southern Worcester is only one-half the size of Metro South-West, in terms of total number of jobs. South Coastal, benefiting from the expansion of office employment and its proximity to Boston, generated 22,560 jobs, the third largest number of jobs and the fastest rate of growth at 17.7 percent. In total, these three SDAs accounted for over 38 percent of the

Commonwealth's jobs between 1984 and 1989. Boston, the state's capital and largest SDA, generated 19,675 jobs, less than half the number Metro South-West created. Job growth averaged 0.7 percent per year in Boston, the lowest of Massachusetts' SDAs.

Service industries generated the bulk of the SDAs' jobs over the period. Only in Brockton and Bristol, areas

Chart 2: Unemployment rates decreased between 1984 and 1987 in Massachusetts, while they continued to fall in the US until 1989.



| Metro North | City of Boston | Metro South-West | South Coastal | Brockton | Bristol | New Bedford Cape & Islands | State of Massachusetts |
|-------------|----------------|------------------|---------------|----------|---------|----------------------------|------------------------|
| 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 4.4 | 2.2 | 3.9 | 6.4 | 5.0 | 4.3 | 5.2 | 4.2 |
| 14.9 | 5.9 | 24.7 | 11.3 | 14.4 | 30.6 | 14.6 | 18.3 |
| 3.3 | 6.0 | 3.1 | 4.0 | 5.9 | 2.9 | 4.6 | 4.1 |
| 8.3 | 3.7 | 8.2 | 5.5 | 7.2 | 6.0 | 3.4 | 6.0 |
| 17.8 | 10.7 | 16.8 | 26.0 | 25.3 | 22.1 | 27.6 | 18.4 |
| 5.1 | 14.4 | 4.9 | 10.8 | 4.3 | 4.2 | 4.4 | 7.0 |
| 37.5 | 39.0 | 27.7 | 24.4 | 21.6 | 17.8 | 24.2 | 28.6 |
| 8.2 | 18.0 | 9.9 | 10.3 | 15.4 | 11.5 | 13.3 | 12.8 |
| 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 9.4 | 9.6 | 9.2 | 9.0 | 7.9 | 7.5 | 8.8 | 8.4 |
| 21.4 | 25.9 | 23.0 | 16.3 | 16.1 | 14.4 | 15.3 | 22.2 |
| 12.6 | 9.6 | 12.7 | 15.4 | 13.6 | 12.6 | 13.6 | 11.7 |
| 19.9 | 24.3 | 18.1 | 20.0 | 18.9 | 15.9 | 15.7 | 18.7 |
| 14.3 | 16.9 | 14.2 | 16.1 | 15.4 | 14.6 | 19.5 | 16.0 |
| 22.4 | 13.7 | 22.8 | 23.2 | 28.2 | 35.5 | 27.1 | 23.0 |

with high concentrations of retail trade industries, did the retail trade sector generate more jobs than service industries.

The mix of service industries within each SDA varies. Boston, Metro South-West, and Metro North have the highest concentrations of high technology service industries in the Commonwealth. In these 3 SDAs, annual service industry wages approximated \$27,000, significantly higher than other SDA's (see table 4). For example, Bristol, Northern Worcester, and Franklin-Hampshire, with smaller concentrations of business service industries, have average annual service industry wages that are only 66 percent of Boston, Metro South-West and Metro North.

The plight of the state's manufacturing sector is also very visible in table 2. Manufacturing employment declined in every SDA over the 1984-1989 period. However, the biggest losses of manufacturing jobs have been in Metro North which lost 26,530 jobs; Metro South-West which

lost 14,230 jobs; and the City of Boston which lost 14,220 jobs.

Job Distribution by Industry and Occupation

Table 3 shows the distribution of jobs by industry sector and occupational group in the state's 15 SDAs. These tables highlight the geographic differences in the structure of each local area's economy and job market. In the city of Boston, for example, fewer than 6 percent of the jobs are in manufacturing industries. In contrast, almost a quarter of the jobs in Metro South-West and over a third of the jobs in Northern Middlesex are in manufacturing.

The mix of industries and the structure of an area's economy directly influences the number and types of jobs found within the SDA. The distribution of jobs in major occupational categories in table 3 illustrates this point. In Berkshire County, for example, approximately 23 percent of the workforce is employed in manufacturing industries, compared to 18

percent statewide. Because an above average number of manufacturing jobs are concentrated in Berkshire County, a greater percentage of the workforce has jobs in production, construction and operating occupations than statewide (28% vs 23%). Similarly, because Berkshire County is not a major banking and insurance center, approximately 15 percent of the SDA's workers have office jobs in clerical occupations, compared to 19 percent statewide.

The distribution of jobs by occupation is based on 1987 data, collected from the Occupational Employment Statistics Survey. Changes in industry structure since 1987 do not significantly affect an area's occupational staffing patterns. Over the long term, however, occupational staffing patterns do change with the advances of technology and supply of new workers.

When reviewing the data in table 3 and tables A, B and C of this report it is important to remember that labor markets for a particular occu-

Table 4: 1989 Average Annual Wages by SDA and Industry

| | Berkshire County | Franklin Hampshire | Hampden County | Northern Worcester | Southern Worcester | Northern Middlesex | Lower Merrimack | Southern Essex |
|---------------------------------|---------------------|-----------------------|-------------------|-----------------------|-----------------------|-----------------------|--------------------|-------------------|
| Total, all Industries | \$21,736 | \$20,253 | \$21,683 | \$21,486 | \$23,002 | \$26,241 | \$24,017 | \$22,964 |
| Construction | 25,773 | 24,628 | 28,663 | 25,645 | 27,444 | 27,341 | 28,270 | 27,525 |
| Manufacturing | 31,263 | 25,813 | 27,554 | 27,630 | 30,368 | 35,339 | 29,746 | 33,533 |
| Communications/Utilities | 22,544 | 25,654 | 26,317 | 21,110 | 28,219 | 22,459 | 29,672 | 25,602 |
| Wholesale Trade | 27,853 | 23,947 | 26,759 | 26,563 | 27,727 | 31,911 | 32,433 | 31,899 |
| Retail Trade | 12,158 | 11,282 | 12,045 | 12,015 | 12,432 | 13,433 | 12,554 | 12,916 |
| Banks, Ins. & Real Estate | 25,548 | 20,241 | 26,010 | 21,010 | 25,847 | 25,222 | 22,964 | 25,008 |
| Services | 19,090 | 18,778 | 19,635 | 18,139 | 19,872 | 21,959 | 20,740 | 19,862 |

pation may cover areas wider than those defined by the SDAs. Many professional occupations, for example, have national labor markets.

Average Annual Wages

Table 4 lists the average annual wage in each SDA by industry sector. The average industry wage gives a comparative measure of the industry's pay scale. Compiled through the Employment and Wages program, the data approximates an average annual wage for all workers in the

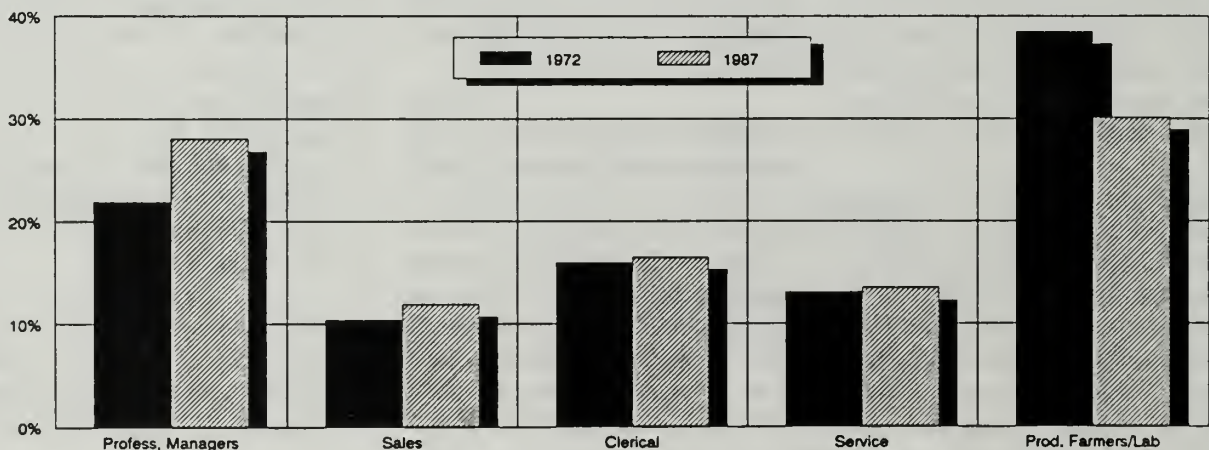
industry. It is computed by dividing the total industry wages by the total number of workers, regardless of part-time or seasonal status.

Given the concentration of banks, law firms, insurance and real estate companies, and high tech industries in Boston, wages here are the highest in the state (\$29,810), followed by Metro South-West (\$28,685), and Metro North (\$26,644). The high concentration of seasonal jobs in New Bedford, Cape Cod and the

Islands contributed to this SDA's reporting the lowest wages in the state (\$19,210).

Wages vary within sectors, depending upon the mix of industries located within the SDA. Given the concentration of computer firms in Metro South-West and Northern Middlesex, for example, the manufacturing wages reported in each of these areas are the highest in the state. In contrast, given the concentration of the low paying apparel

Chart 3: The percentage share of employment in the US is rising the fastest in occupational groups requiring the most education and decreasing in occupations requiring less education



| Metro North | City of Boston | Metro South-West | South Coastal | Brockton | Bristol | New Bedford Cape & Islands | State of Massachusetts |
|-------------|----------------|------------------|---------------|----------|----------|----------------------------|------------------------|
| \$26,644 | \$29,810 | \$28,527 | \$22,685 | \$22,568 | \$20,306 | \$19,210 | \$25,220 |
| 31,948 | 35,439 | 31,775 | 30,861 | 29,601 | 25,010 | 24,454 | 29,554 |
| 31,688 | 31,345 | 36,854 | 27,016 | 24,625 | 23,443 | 22,333 | 30,926 |
| 30,025 | 36,196 | 29,273 | 31,008 | 27,067 | 27,156 | 25,486 | 29,889 |
| 34,402 | 34,227 | 38,408 | 30,622 | 29,729 | 26,733 | 23,015 | 32,779 |
| 14,747 | 15,128 | 15,683 | 14,238 | 14,687 | 12,151 | 12,743 | 13,775 |
| 26,747 | 41,550 | 27,903 | 26,185 | 23,572 | 19,493 | 22,079 | 31,525 |
| 27,332 | 27,678 | 26,609 | 20,528 | 20,162 | 17,916 | 18,465 | 24,010 |

and needle trade industries in Bristol and New Bedford, manufacturing wages here are the lowest in the state.

The same can be said of service industry wages. The city of Boston and Metro North have the highest paying service industries in the state. The average worker employed in Boston's service industries earned \$27,678 in 1989, the highest in the state. Similarly, due to the concentration of high paying engineering, management and research firms in the service industries in Metro North, the area is the only SDA where the average service wage is higher than the average for all wages (\$27,332 vs. \$26,644).

Education's Importance

With the economy currently restructuring, occupational growth will certainly be affected, since each industry requires a different mix of occupations to produce its goods and services. An analysis of the kinds of jobs generated in the United States between 1972 and 1987 shows that, in general, employment increased the fastest in occupational groups requiring the most education and decreased in occupations requiring less education. In 1972 managerial, executive and administrative occupations were 8.9 percent of all jobs. By 1987, their share increased 2.9 percentage points to 11.8

percent. In contrast, the share of low skilled occupations such as operators, fabricators, and laborers decreased 6 percentage points. In 1972 they were 21.2 percent of all jobs--the largest occupational share--but by 1987 they were only 15.2 percent of all jobs. These trends are expected to continue in the 1990s.

Education and Jobs in Massachusetts

Despite Massachusetts' recent downturn in employment, the educational requirements in the emerging job market will continue to be more heavily geared toward those jobs requiring either college or post secondary training.

The Northern Worcester Service Delivery Area

Economic Overview

Northern Worcester had the second fastest growing population among Massachusetts' 15 SDAs during the eighties. Benefitting from the economic boom in eastern Massachusetts and inflated real estate values in suburbs closer to Boston, Northern Worcester's population increased 8.3 percent, from 208,324 in 1980 to 225,650 in 1988. As population increased, demand for new homes and local services led to increased numbers of jobs in construction; retail stores; finance, insurance and real estate; schools; and other service industries. From 1984 to 1988 Northern Worcester prospered. Employment increased 2.5 percent per year, faster than the 2.4 percent statewide expansion, generating 7,570 new jobs. Unemployment dropped from a high of 8.3 percent in 1983 to a low of 3.5 percent in 1988.

Northern Worcester's economic expansion halted in 1988 when eastern Massachusetts' economic growth leveled off. The beginning of Massachusetts' recession in 1989, however, dropped employment 1.6 percent. Employment also declined in areas with more diverse economic bases, but not by the

same magnitude. In Massachusetts and Metro South/West, for example, employment declined 0.7 percent and 0.4 percent, respectively, less than half the job losses of Northern Worcester. As is true for the state, employment declined much faster in 1990.

Light manufacturing in plastics and furniture accounts for the most jobs in Northern Worcester. Between 1984-1989, the manufacturing share of total employment fell from 36.9 percent to 28.7 percent. This downward trend puts the future long-term development of Northern Worcester into question because growth in its other industries depends principally on growth in manufacturing. Primarily because of the job losses in manufacturing, Northern Worcester's wages are declining as a percent of total state wages.

Due to the high concentration of manufacturing firms in Northern Worcester, the largest number of jobs here are found in production, construction, assembly and machining occupations (36.5%). Clerical and administrative jobs comprise the second largest number of jobs in Northern Wor-

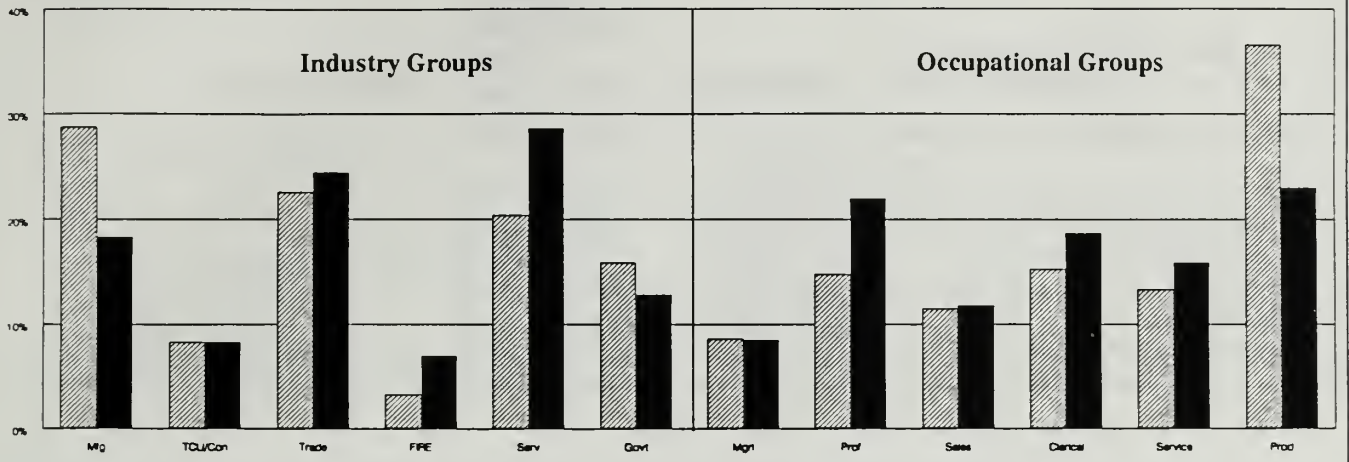
cester, (15.3%). This represents a significant departure from the state's occupational staffing pattern, where professional and technical workers account for the second largest number of jobs.

Definition of Area

The Northern Worcester SDA is located in the Mount Wachusett region of central Massachusetts. It consists of vast state parks, rural agricultural areas, suburbs of the City of Worcester and exurbs of Boston.

Distribution of Employment by Industry and Occupation

 Northern Worcester
 State Average



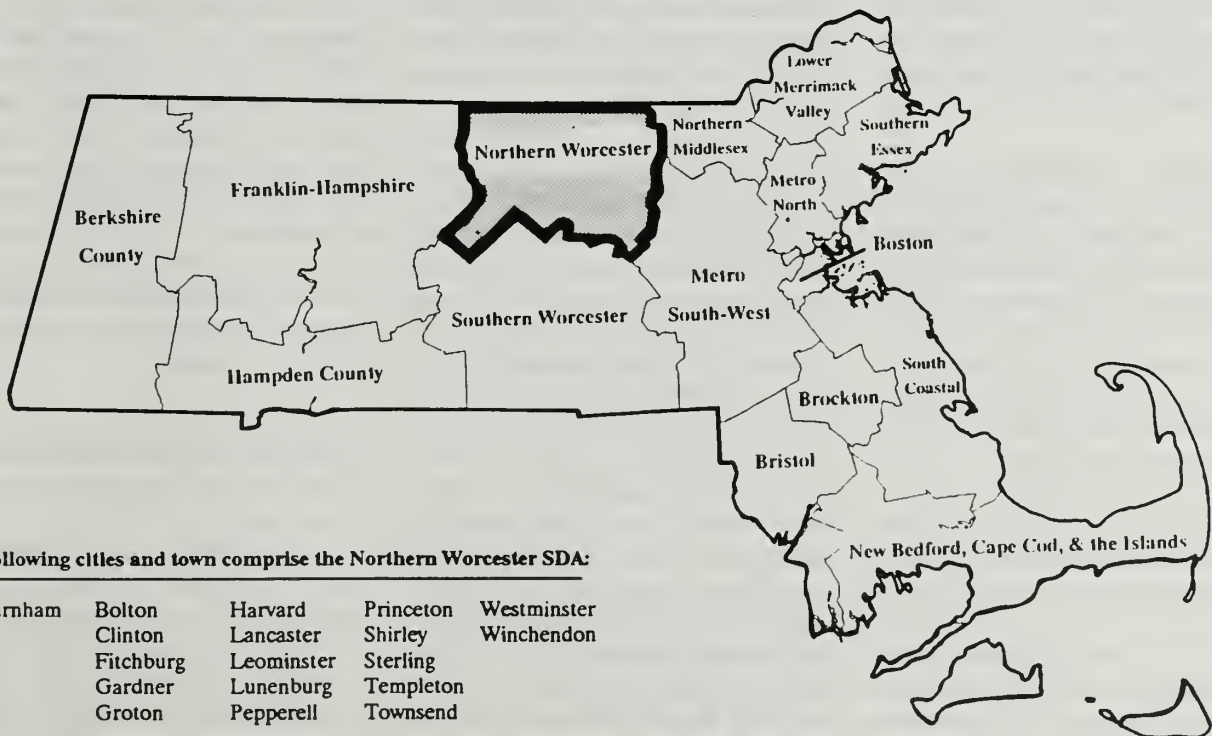
Economic Base

Manufacturing accounts for 18.4 percent of the jobs in Massachusetts, but 28.7 percent in Northern Worcester. Since manufacturing accounts for the most employment, its trends are of fundamental importance to Northern Worcester's economic well-being.

Manufacturing in Northern Worcester is spread across several industries, including miscellaneous plastics, nonelectrical machinery, paper and related products, printing and publishing and furniture and fixtures. The largest industry is miscellaneous plastics prod-

ucts, however, accounting for more than a fifth of manufacturing.

Since plastics are used in great numbers of applications and products, the miscellaneous plastics products industry is one of the largest employers in



Employment in Major Groups

| | | Percent Distribution | |
|---|------------|-------------------------|------------------|
| <i>(Note employment levels exclude federal government, private households and agricultural workers)</i> | Employment | SDA | State Average |
| Total, all Occupations | 74,415 | 100.0 | 100.0 |
| Prod/Const Wkrs & Operators | 27,145 | 36.5 | 23.0 |
| Clerical & Admin Workers | 11,380 | 15.3 | 18.7 |
| Professional & Technical | 11,035 | 14.8 | 22.0 |
| Service Workers | 9,885 | 13.3 | 15.9 |
| Sales Workers | 8,550 | 11.5 | 11.8 |
| Managers and Executives | 6,420 | 8.6 | 8.5 |

both the state and nation. Miscellaneous plastics firms in Northern Worcester account for approximately 23 percent of the state's employment.

From 1984 to 1989, Northern Worcester lost 15 percent of its manufacturing jobs, while the state lost 16.7 percent. However, since manufacturing plays a far greater role in the Northern Worcester economy, its trends are fundamentally important to the economic performance of the SDA's service and retail trade sectors.

Service industries employ 16,170, the second largest number of workers in Northern Worcester. Although they comprise a smaller share of employment here than in Massachusetts (20.4% vs 28.6%), service industries in Northern Worcester are more consumer-oriented, and thus depend to a greater extent on local population and income growth to sustain themselves.

Service industries encompass a wide range of activities such as health, education, business, management consulting, computer and data processing, and accounting. Despite this diversity, services can still be divided into two major categories: services used by consumers, and services used by business in

the production of goods and services. Establishments providing services in personal care, repair, health, and education primarily serve the local population and account for 74.4 percent of service sector employment in Northern Worcester, compared to 59.7 percent statewide. Business and high tech service industries in computer and data processing, engineering, research and testing account for only 25.6 percent of service employment in Northern Worcester services compared to 40.3 percent in Massachusetts.

Retail trade employs the third largest number of workers in Northern Worcester (14,650) and accounts for 18.5 percent of total employment, about the same percentage share as in the state. However, eating and drinking places, the largest retail industry in both Massachusetts and Northern Worcester, accounts for a smaller percent of retail trade employment in the SDA than in the state as a whole (29.6% vs. 31.6%). Retail trade is one of the most cyclically sensitive industries in an economy. During prosperous times retail trade jobs expand; during slow ones they contract. Between 1984-1989, retail trade employment grew faster and accounted for a greater percentage of jobs in Northern Worcester than in

Massachusetts. Figures on retail trade job losses in 1990 for Northern Worcester are not yet available, however statewide, retail trade contracted 5.5 percent. Retail trade employment over the long term, is expected to grow, but more slowly than in the past, as growth in population and disposable income slows.

Transportation, communications and utilities; finance, insurance and real estate; wholesale trade; and construction account for less than 5 percent each of employment in Northern Worcester. Employment growth in these industries depends on local factors such as population trends and business development, therefore these industries account for a greater share of employment in Massachusetts than in Northern Worcester.

Occupational Composition

Given the high number of manufacturing establishments in Northern Worcester, production and construction workers, mechanics, operators and laborers hold the most jobs, 27,145 or 36.5 percent. This percentage share is significantly greater than the 23 percent employment concentration found in these occupations statewide.

Top Ten Occupations and Industries with the Largest Employment

Top Ten Occupations

| | |
|--|-------|
| General Managers and Top Executives | 2,795 |
| Retail Trade Sales Representatives | 2,645 |
| Cashiers | 2,150 |
| Helpers and Laborers, nec | 1,870 |
| Secretaries | 1,735 |
| Assemblers and Fabricators, exc Machine & Electrical | 1,565 |
| Bookkeepers & Auditing Clerks | 1,505 |
| Waiters and Waitresses | 1,505 |
| General Office Clerks | 1,425 |
| Plastic Molding & Casting Machine Operators & Tenders .. | 1,230 |

Top Ten Industries

| | |
|--|-------|
| Elementary & Secondary Schools, public & private | 5,470 |
| Misc. Plastics Products | 4,440 |
| Eating & Drinking Places | 4,330 |
| Local Govt., exc Schools | 2,890 |
| Hospitals | 2,730 |
| Grocery Stores | 2,590 |
| Nursing & Personal Care Facilities | 2,030 |
| Commercial Printing | 1,870 |
| Communications Equipment | 1,410 |
| Computer & Office Equipment | 1,410 |

The second largest number of jobs in Northern Worcester is found in clerical and administrative occupations. However, because Northern Worcester is not a major banking and insurance center, clerical and administrative jobs account for only 15 percent of employment here compared to 18 percent statewide.

Professional and technical workers rank third with 11,025 jobs. Because statewide Massachusetts has more high tech industries than Northern Worcester, professional and technical workers make up a greater percent of employment in the state than in this SDA (22% vs. 14.8%).

Jobs in food service and other service occupations account for 13.3 percent of jobs in Northern Worcester. Sales workers and managers account for 11.5 percent and 8.6 percent of jobs, respectively, about the same percentage shares of these jobs statewide.

Employment in Major Groups

The following sections summarize employment in occupations with the largest number of jobs within each category. Comparisons made between the state and the SDA identify the

major differences in the occupational concentration of employment.

Managerial and Executive Occupations

Managers and executives hold 6,420 jobs or 8.6 percent of the jobs in Northern Worcester. Statewide, managers and executives hold approximately the same percentage share (8.5%). About 30 percent of the managers in Northern Worcester are managers of finance, personnel, purchasing, marketing, engineering and administrative services. Middle managers in education, health services, manufacturing, construction, real estate, communications, and food service account for another 20 percent of the management jobs. General managers and top executives, whose jobs are too diverse and general in nature to be classified in any functional or line area of management, account for the most jobs, 43.5 percent.

Professional and Technical Occupations

Professional and technical workers numbering 11,025, hold 14.8 percent of the jobs in Northern Worcester. Teachers, educators and instructors account for the largest number of professional and technical jobs, 4,230, or 38.4 percent. Health practitioners, technologists

and technicians at 2,555 have the second largest number of jobs. Registered nurses account for 40 percent of all health practitioners and technicians in the SDA. Accountants, auditors and other financial specialists; purchasing agents and buyers; personnel training and labor relations specialists; and other management support workers hold the third largest number of jobs, 1,455, or 13.2 percent. The fourth largest number of jobholders, engineers and engineering technicians account for another 1,060 jobs.

Sales Occupations

Sales workers comprise 11.5 percent of employment in Northern Worcester. Retail trade sales representatives, cashiers and stock clerks account for 68 percent of the sales jobs.

Clerical Occupations

The 11,385 clerical workers in Northern Worcester comprise 15.3 percent of SDA employment. Secretaries, bookkeepers, and general office workers account for nearly half the employment in clerical occupations.

Service Occupations

Half of the 9,880 jobs in service occupations consists of jobs in food service. Cooks, waiters and waitresses and food

Labor Force, Employment and Unemployment

| | Labor Force | Employed | Unemployed | Unemployment Rate | |
|------|-------------|----------|------------|-------------------|---------------|
| | | | | SDA | State Average |
| 1983 | 100,800 | 92,330 | 8,460 | 8.4 | 6.9 |
| 1984 | 100,770 | 95,450 | 5,320 | 5.3 | 4.8 |
| 1985 | 100,150 | 95,880 | 4,260 | 4.3 | 3.9 |
| 1986 | 100,060 | 95,750 | 4,320 | 4.3 | 3.8 |
| 1987 | 104,440 | 100,670 | 3,770 | 3.6 | 3.2 |
| 1988 | 108,550 | 104,800 | 3,750 | 3.5 | 3.3 |
| 1989 | 108,280 | 103,270 | 5,020 | 4.6 | 4.0 |
| 1990 | 107,020 | 99,090 | 7,940 | 7.4 | 6.0 |

preparers hold the majority of food service jobs. Janitors and cleaners, nursing aides, orderlies and attendants, and security guards account for another 25 percent of employment in service occupations.

Production, Construction and Machining Occupations

Production and construction workers, mechanics, operators, and helpers and laborers have the most jobs, 27,145, or 36.5 percent of all jobs in Northern Worcester. Machine setters, operators and tenders are the largest jobholders in this group with 6,915 jobs, 25.5 percent of employment. Helpers, laborers and material movers such as bus and truck drivers, operating engineers, industrial truck and tractor operators, and gasoline service station attendants each comprise another 12.6 percent of employment. The fourth largest group of jobholders, mechanics, repairers and installers, account for 3,155 jobs. General utility maintenance repairers and auto mechanics and autobody repairers comprise 57 percent of all mechanics and repairers in Northern Worcester.

Assemblers and other handworkers comprise another 11.4 percent of employment. Construction trades workers and precision production workers account for 9.5 and 8.0 percent of employment, respectively. Tool and die makers and machinists hold 750 jobs or 33 percent of the jobs in precision production occupations. Inspectors and supervisors, with 8 percent, account for the remaining employment in this category.

Population

During the eighties Northern Worcester had the fourth largest increase in population among the state's 15 SDAs. Between 1980 and 1988 Northern Worcester's population increased 8.3 percent, from 208,324 to 225,650, gaining 17,326 residents. Most of this population growth, however, stemmed from an increase in births over deaths, rather than from an increase in the numbers of people moving into the area. Over the period, 3,465 people moved into the area, the second largest such increase among the 15 SDAs, and 13,860 births over deaths occurred. Fitchburg and Leominster account for a third of this SDA's population.

Labor Force/Unemployment

Labor force growth in Northern Worcester exceeded population growth rates during the eighties. Fueled by increases in the percentages of women looking for work and the aging of the "baby boomers," the labor force expanded 12.3 percent, from 97,270 in 1980 to 109,220 in 1989. In 1990, however, Northern Worcester's job market contracted. Correspondingly the labor force declined marginally as well, to 107,740.

After the 1981-82 recession, growth in the number of jobs began to offset the number of jobseekers and the SDA's unemployment rate fell from 8.4 percent in 1983 to a low of 3.5 percent in 1988.

Calendar year 1987, however, marked the end of declining unemployment. In 1989 both the number of unemployed and the jobless rate increased. In 1990 unemployment increased 58 percent as the jobless rate rose to 7.4 percent, the highest level in seven years. Had the size of Northern Worcester's labor

force increased between 1989 and 1990, its current unemployment rate would be even higher.

Income/Wages

The shutdown or expansion of one or several firms in areas with small populations can often have an adverse impact on its residents' standard of living. The most recent wage data compiled for the Northern Worcester SDA indicate a gradual slippage in wages com-

pared to changes in wages throughout the state.

In 1984 the average annual wage in Northern Worcester for all workers covered by unemployment insurance was \$16,133 or 87.6 percent of the statewide average (\$18,418). In 1989 the average annual wage in Northern Worcester was \$21,486 or 85.2 percent of the state's wages. Job losses in manufacturing help account for this difference.

During the eighties, wages lost from manufacturing job losses could not be offset by the typical new job being created in retail trade and services, sectors that traditionally offer lower pay and more part-time hours. In 1989, for example, the average job in manufacturing paid \$27,554 compared to \$18,139 in services and \$12,015 in retail trade.

**Table A:
Northern Worcester
Employment
by Occupation**

| | | Employment | Percent Distribution |
|--|--|------------|-------------------------|
| Managerial Occupations | Total Occupational Employment | 74415 | 100.00 |
| | Managerial And Administrative Occupations | 6420 | 8.60 |
| | Staff And Administrative Specialty Managerial Occupations | 1950 | 2.61 |
| | Financial Managers | 680 | 0.91 |
| | Personnel, Training And Labor Relation Managers | 100 | 0.13 |
| | Purchasing Managers | 185 | 0.25 |
| | Marketing, Advertising And Related Managers | 300 | 0.40 |
| | Administrative Service Managers | 475 | 0.64 |
| | Engineering, Mathematical And Natural Science Managers | 210 | 0.28 |
| | Line And Middle Management Industry Specific Occupations | 1225 | 1.63 |
| | Education Administrators | 315 | 0.42 |
| | Medical And Health Service Managers | 120 | 0.16 |
| | Industrial Production Managers | 340 | 0.46 |
| | Construction Managers | 190 | 0.25 |
| | Communications, Transportation, Utilities Operations Managers | 100 | 0.13 |
| | Food Service And Lodging Managers | 160 | 0.21 |
| | Other Managerial And Administrative Occupations | 3245 | 4.36 |
| | Pub Admin Chief Executives, Legislators, Genral Administrators | 105 | 0.14 |
| | General Managers And Top Executives | 2795 | 3.76 |
| | All Other Managers And Administrators | 345 | 0.46 |
| Professional & Technical Occupations (Management Support Occupations) | Professional, Paraprofessional And Technical Occupations | 11035 | 14.84 |
| | Accountants, Auditors And Other Financial Specialists | 645 | 0.87 |
| | Loan Officers And Counselors | 125 | 0.17 |
| | Accountants And Auditors | 370 | 0.50 |
| | All Other Financial Specialists | 150 | 0.20 |
| | Purchasing Agents And Buyers | 170 | 0.22 |
| | Wholesale And Retail Buyers, Except Farm Products | 70 | 0.09 |
| | Purchasing Agents - Exc Wholesale, Retail & Farm Products | 100 | 0.13 |
| | Personnel, Training, Labor Relations Specialists And Related | 90 | 0.12 |
| | Personnel, Training And Labor Relations Specialists | 90 | 0.12 |
| | Other Management Support Workers | 550 | 0.74 |
| | Cost Estimators | 175 | 0.23 |
| | Assessors | 95 | 0.13 |
| | All Other Management Support Workers | 280 | 0.38 |
| | Engineers | 610 | 0.83 |
| | Civil Engineers, Including Traffic Engineers | 75 | 0.10 |
| | Electrical And Electronic Engineers | 175 | 0.24 |
| | Industrial And Safety Engineers | 90 | 0.12 |
| | Mechanical Engineers | 140 | 0.19 |
| | All Other Engineers | 130 | 0.18 |
| (Engineers & Engineering Technicians) | Engineering And Related Technicians And Technologists | 420 | 0.57 |
| | Electrical, Electronic Engineerng Technicians, Technologists | 120 | 0.16 |
| | Drafters | 125 | 0.17 |
| | All Other Engineering Technicians And Technologists | 175 | 0.24 |
| | | | |

**Table A:
Northern Worcester
Employment
by Occupation**

| | | Employment | Percent Distribution |
|--|---|------------|-------------------------|
| (Computer & Math Scientists) | Physical Scientists | 85 | 0.11 |
| | Chemists, Except Biochemists | 85 | 0.11 |
| | Physical And Life Science Technicians And Technologists | 70 | 0.09 |
| | Chemical Technicians, Technologists, Exc Health, Engineering | 70 | 0.09 |
| | Computer Scientists And Related Workers | 215 | 0.29 |
| | Systems Analysts, Electronic Data Processing | 100 | 0.13 |
| | Computer Programmers | 115 | 0.16 |
| | Social Scientists, Including Urban And Regional Planners | 55 | 0.07 |
| | All Other Social Scientists | 55 | 0.07 |
| | Other Selected Social Science Related Workers | 505 | 0.68 |
| (Lawyers, Paralegals & Related) | Social Workers, Medical And Non-medical | 280 | 0.38 |
| | Social Service Technicians | 125 | 0.17 |
| | Recreation Workers | 100 | 0.13 |
| | Lawyers And Related Workers | 100 | 0.13 |
| (Teachers Educa- tors, Librarians & Related) | Lawyers | 100 | 0.13 |
| | College And University Faculty | 675 | 0.91 |
| | Other Teachers And Instructors | 2975 | 4.00 |
| | Teachers, Preschool And Kindergarden | 185 | 0.25 |
| | Teachers, Elementary | 985 | 1.32 |
| | Teachers, Secondary School | 1035 | 1.39 |
| | Teachers, Special Education | 340 | 0.46 |
| | Teachers And Instructors, Vocational Education | 85 | 0.11 |
| | Instructors And Coaches, Sports | 185 | 0.25 |
| | All Other Teachers And Related Workers | 160 | 0.22 |
| (Health Pracitioners, Technicians & Technologists) | Librarians, Archivists, Curators, Other Slected Ed Rel Workrs | 560 | 0.75 |
| | Librarians, Professional | 110 | 0.15 |
| | Technical Assistants, Library | 70 | 0.09 |
| | Vocational And Educational Counselors | 95 | 0.13 |
| | Teacher Aides, Paraprofessional | 285 | 0.38 |
| | Health Diagnosing And Treating Practitioners | 180 | 0.24 |
| | Physicians And Surgeons | 95 | 0.13 |
| | Dentists | 85 | 0.11 |
| | Therapists | 150 | 0.20 |
| | Speech Pathologists And Audiologists | 55 | 0.07 |
| | All Other Therapists | 95 | 0.13 |
| | Selected Health Care Maintenance And Treating Workers | 1585 | 2.14 |
| | Registered Nurses | 1040 | 1.40 |
| | Licensed Practical Nurses | 370 | 0.50 |
| | Pharmacists | 110 | 0.15 |
| | Dieticians And Nutritionists | 65 | 0.09 |
| | Other Health Professionals, Paraprofessionals And Technicians | 640 | 0.86 |
| | Medical And Clinical Laboratory Technologists And Technicians | 155 | 0.21 |
| | Dental Hygienists | 100 | 0.13 |
| | Radiologic Technicians | 115 | 0.16 |
| | All Other Health Professionals And Others | 270 | 0.36 |

**Table A:
Northern Worcester
Employment
by Occupation**

| | Employment | Percent Distribution |
|----------------------------------|---|-------------------------|
| Marketing & Sales Occupations | Selected Writers, Artists, Entertainers, Athletes And Related Designers | 175 0.24 |
| | Other Professional, Paraprofessional, Technical Occupations | 580 0.78 |
| | All Other Professional, Paraprofessional And Technicians | 580 0.78 |
| | Sales And Related Occupations | 8550 11.49 |
| | First Line Supervisors And Manager/supervisors | 515 0.69 |
| | First Line Supervisors And Manager/supervisors - Sales And Re | 515 0.69 |
| | Sales Occupations, Services | 340 0.45 |
| | Sales Agents And Placers, Insurance | 85 0.11 |
| | Travel Agents | 55 0.07 |
| | Sales Agents, Advertising | 80 0.11 |
| | All Other Sales Representatives, Service | 120 0.16 |
| | Merchandise, Products, Other Sales, Sales-related Occupations | 7695 10.35 |
| | Sales Reps, Scientific And Related Products And Services | 480 0.65 |
| | Sales Reps, Exc Scientific And Related Products Or Services | 645 0.87 |
| | Salespersons, Retail Trade | 2645 3.55 |
| | Salespersons, Parts | 230 0.31 |
| | Counter And Rental Clerks | 130 0.18 |
| | Stock Clerks, Sales Floor | 1045 1.40 |
| | Cashiers | 2150 2.89 |
| | All Other Sales And Related Workers | 370 0.50 |
| Clerical Occupations | Clerical And Administrative Support Occupations | 11380 15.30 |
| | First Line Supervisors And Manager/supervisor | 845 1.14 |
| | First Line Supervisors - Clerical And Administrative Clerks | 845 1.14 |
| | Banking, Security, Finance And Credit Workers | 995 1.34 |
| | Tellers | 640 0.86 |
| | New Accounts Clerks | 110 0.15 |
| | Loan And Credit Clerks | 75 0.10 |
| | Adjustment Clerks | 170 0.23 |
| | Selected Insurance Workers | 75 0.10 |
| | Insurance Policy Processing Clerks | 75 0.10 |
| | Investigative And Related Workers, Except Insurance | 55 0.07 |
| | Bill And Account Collectors | 55 0.07 |
| | Other Selected Industry Specific Workers | 220 0.30 |
| | Library Assistants And Bookmobile Drivers | 95 0.13 |
| | Teacher Aides And Education Assistants | 125 0.17 |
| | Secretaries, Stenographers And Typists | 1935 2.60 |
| | Legal Secretaries | 85 0.11 |
| | Medical Secretaries | 115 0.16 |
| | Secretaries | 1735 2.33 |
| | Other Secretarial Related And General Office Workers | 4210 5.66 |
| | Receptionists And Information Clerks | 390 0.52 |
| | Typists And Word Processors | 230 0.31 |
| | File Clerks | 80 0.11 |
| | Order Clerks - Materials, Merchandise And Service | 185 0.25 |
| | Interview Clerks, Except Personnel And Welfare | 70 0.09 |

**Table A:
Northern Worcester
Employment
by Occupation**

| | Employment | Percent Distribution |
|---|------------|-------------------------|
| Bookkeeping, Accounting, Auditing Clerks | 1505 | 2.02 |
| Payroll And Timekeeping Clerks | 105 | 0.14 |
| Billing, Cost And Rate Clerks | 220 | 0.30 |
| General Office Clerk | 1425 | 1.92 |
| Electronic Data Processing, Other Office Machine Occupations | 545 | 0.74 |
| Computer Operators, Except Peripheral Equipment | 265 | 0.36 |
| Data Entry Keyers, Except Composing | 140 | 0.19 |
| All Other Office Machine Operators | 140 | 0.19 |
| Communications Equipment Operators | 185 | 0.25 |
| Switchboard Operator | 185 | 0.25 |
| Material Recording, Scheduling, Dispatching, Distributing | 1745 | 2.33 |
| Production, Planning, Expediting Clerks | 270 | 0.36 |
| Stock Clerks - Stockroom, Warehouse And Storage Yard | 725 | 0.97 |
| Order Fillers, Wholesale And Retail Sales | 70 | 0.09 |
| Traffic, Shipping And Receiving Clerks | 530 | 0.71 |
| All Other Material Recording And Related Workers | 150 | 0.20 |
| All Other Clerical And Administrative Support Occupations | 570 | 0.77 |
| All Other Clerical And Administrative Support Workers | 570 | 0.77 |
| Service Occupations | | |
| Service Occupations | 9885 | 13.28 |
| First Line Supervisors - Service | 295 | 0.40 |
| Protective Service Occupations | 810 | 1.10 |
| Fire Fighters | 145 | 0.20 |
| Police Detectives And Investigators | 115 | 0.16 |
| Guards And Watch Guards | 490 | 0.66 |
| All Other Protective Services | 60 | 0.08 |
| Food And Beverage Preparation And Service Workers | 4980 | 6.70 |
| Hosts And Hostesses | 125 | 0.17 |
| Bartenders | 455 | 0.61 |
| Waiters And Waitresses | 1505 | 2.02 |
| Dining Room, Counter And Cafe Attendants | 430 | 0.58 |
| Bakers, Bread And Pastry | 50 | 0.07 |
| Butchers And Meat Cutters | 105 | 0.14 |
| Cooks, Restaurant | 325 | 0.44 |
| Cooks, Institution Or Cafe | 295 | 0.40 |
| Cooks, Speciality Fast Food And Fast Food | 345 | 0.46 |
| Food Preparation Workers | 640 | 0.86 |
| All Other Food Service Workers | 705 | 0.95 |
| Health Service And Related Occupations | 1365 | 1.83 |
| Dental Assistants | 135 | 0.18 |
| Medical Assistants | 60 | 0.08 |
| Nurse Aides, Orderlies And Attendants | 825 | 1.11 |
| Home Health Aides | 240 | 0.32 |
| All Other Health Servicers | 105 | 0.14 |
| Cleaning, Building Service Occupations, Exc Private Househlds | 1620 | 2.18 |
| Janitors And Cleaners, Including Housekeepers And Maids | 460 | 0.62 |
| Janitors And Cleaners | 1085 | 1.46 |
| All Other Cleaning And Building Service Workers | 75 | 0.10 |
| Personal Service Occupations | 345 | 0.46 |
| Cosmetologists And Related | 240 | 0.32 |
| Social Welfare Service Aides | 105 | 0.14 |

**Table A:
Northern Worcester
Employment
by Occupation**

| by Occupation | Employment | Percent Distribution |
|--|---|----------------------|
| | All Other Service Occupations | 2650.36 |
| | All Other Service Workers | 2650.36 |
| | Agricultural, Forestry, Fishing And Related Occupations | 2050.27 |
| | Gardners And Groundskeepers, Except Farm | 1650.22 |
| | All Other Agricultural, Forestry And Related Workers | 400.05 |
| Production, Construction & Maintenance Occupations | Production, Construction And Maintenance Occupations | 2714536.47 |
| | First Line Supervisors, Manager/supers - Prod, Constr, Maint | 13751.86 |
| | First Line Supervisors - Mechanics And Repairers | 2700.36 |
| | First Line Supervisors - Constuction And Related | 1600.22 |
| | First Line Supervisors - Production And Related | 7150.96 |
| | First Line Supervisors - Transportation And Related | 650.09 |
| | First Line Supervisors - Helpers And Others | 1150.16 |
| | Blue Collar Worker Supervisors | 500.07 |
| | Inspectors And Related Occupations | 8201.10 |
| (Mechanics, Installers & Repairers) | Precision And Production Inspectors | 8201.10 |
| | Machinery And Related Mechanics, Installers And Repairers | 13501.81 |
| | Machinery Maintenance Mechanics | 1800.24 |
| | Mach Maintenance Mechanics, Water Or Power Generation Plant | 650.09 |
| | Machinery Maintenance Wworkers | 550.07 |
| | Maintenance Repairers, General Utility | 10501.41 |
| | Mobile Equipment Mechanics, Installers And Repairers | 8301.12 |
| | Automotive Mechanics | 4550.61 |
| | Automotive Body And Related Repairers | 2950.40 |
| | Bus And Truck Mechanics And Diesel Mechanics | 800.11 |
| | Communications Equipment Mechanics, Installers And Repairers | 550.07 |
| | All Other Commun Equip Maintainers, Installers, Repairers | 550.07 |
| | Other Electrical, Electronic Equip Mechs, Installers, Repairs | 2450.32 |
| | Electric Powerline Installers And Repairers | 700.09 |
| | Station Installers And Repairers, Telephone | 550.07 |
| | All Other Electric, Electronic Equip Mechs, Reprers, Instllrs | 1200.16 |
| | Other Mechanics, Installers And Repairers | 6800.91 |
| | Heating, Air Conditioning, Refrigeration Mechs, Installers | 1500.20 |
| (Construction Trades Occupations) | All Other Mechanics, Installers And Repairers | 5300.71 |
| | Selected Carpentry And Related Workers | 10251.38 |
| | Carpenters | 7951.07 |
| | Drywall Installers And Tapers | 2300.31 |
| | Selected Electrical And Related Workers | 2300.31 |
| | Electricians | 2300.31 |
| | Selected Masonry And Related Workers | 2700.36 |
| | Brick Masons And Stone Masons | 550.07 |
| | Concrete And Terrazzo Finishers | 950.13 |
| | Reinforcing Metal Workers | 600.08 |
| | Plasterers And Stucco Masons | 600.08 |
| | Selected Painting And Related Workers | 2850.38 |
| | Painters, Paperhangers, Construction And Maintenance | 2850.38 |

**Table A:
Northern Worcester
Employment†
by Occupation**

| by Occupation | Employment | Percent Distribution | |
|---|---|----------------------|------|
| (Precision Production Occupations) | Selected Plumbing And Related Workers | 295 | 0.40 |
| | Plumbers, Pipefitters And Steamfitters | 295 | 0.40 |
| | Selected Road, Rail, Related Constr & Maint Wrkrs, Exc Masons | 90 | 0.12 |
| | Highway Maintenance Workers | 90 | 0.12 |
| | All Other Construction Trades Workers | 80 | 0.11 |
| | Roofers | 80 | 0.11 |
| | Extractive And Related, Including Blasters | 310 | 0.42 |
| | All Other Construction And Extractive Occupations | 310 | 0.42 |
| | Precision Metal Workers | 1050 | 1.42 |
| | Tool And Die Makers | 215 | 0.29 |
| (Machine Setters, Set-up Operators, Operators, & Tenders) | Machinists | 535 | 0.72 |
| | Precision Tool Grinders, Filers, Sharpeners | 60 | 0.08 |
| | Sheet Metal Workers | 175 | 0.24 |
| | All Other Precision Metal Workers | 65 | 0.09 |
| | Precision Woodworkers | 515 | 0.70 |
| | Wood Machinists | 210 | 0.28 |
| | Cabinetmakers And Bench Carpenters | 125 | 0.17 |
| | Furniture Finishers | 115 | 0.16 |
| | All Other Precision Woodworkers | 65 | 0.09 |
| | Precision Textile, Apparel And Furnishings Workers | 85 | 0.11 |
| | All Other Precision Textile And Related Workers | 85 | 0.11 |
| | Precision Printing Workers | 245 | 0.33 |
| | Precision Lithography And Photoengraving Workers | 155 | 0.21 |
| | All Other Precision Printing Workers | 90 | 0.12 |
| | Precision Food Workers | 105 | 0.14 |
| | Food Batchmakers | 105 | 0.14 |
| | Other Precision Workers | 160 | 0.22 |
| | All Other Precision Workers | 160 | 0.22 |
| | Machine Tool Cutting Setters, Ops And Related - Metal, Plas | 175 | 0.24 |
| | Lathe, Turning Mach Tool Setters, Set-up Operators, Metal, Pl | 75 | 0.10 |
| Drilling, Boring Mach Tool Setters, Set-up Ops, Metal, Pl | 50 | 0.07 | |
| Machine Tool Cutting Operators | 50 | 0.07 | |
| Machine Forming Setters, Operators And Related Workers | 530 | 0.70 | |
| Punching Machine Setters And Set-up Operators, Metal, Plastic | 55 | 0.07 | |
| Press, Press Brake Machine Setters, Set-up Ops, Metal, Plas | 100 | 0.13 | |
| Extruding, Drawing Machine Setters, Set-up Ops, Metal And Pla | 195 | 0.26 | |
| Sheetmetal Machine Operator | 180 | 0.24 | |
| Numerical And Combination Tool Setters, Operators And Related | 450 | 0.60 | |
| Numerical Control Machine Tool Operators, Tenders, Met, Plas | 95 | 0.13 | |
| Combination Machine Tool Setters, Set-up Ops, Metal, Plastic | 285 | 0.38 | |
| Combination Machine Tool Operators, Metal And Plastics | 70 | 0.09 | |
| Metal Fabricating, Related Machine Setters, Operators | 55 | 0.07 | |
| Metal Fabricators, Structural Metal Products | 55 | 0.07 | |
| Metal, Plastic Processing Machine Setters, Operators, Related | 1335 | 1.79 | |
| Plastic Molding, Casting Machine Setters, Set-up Operators | 105 | 0.14 | |
| Plastic Molding, Casting Machine Operators And Tenders | 1230 | 1.65 | |

Table A:
Northern Worcester
Employment
by Occupation

| | Employment | Percent Distribution |
|---|------------|----------------------|
| All Other Metal, Plastic Machine Setters, Operators, Related | 540 | 0.72 |
| All Other Metal, Plastic Machine Setters, Set-up Operators | 270 | 0.36 |
| All Other Metal And Plastic Machine Operators And Tenders | 270 | 0.36 |
| Woodworking Machine Setters, Operators, Other Related Workers | 425 | 0.58 |
| Sawing Machine Operators | 140 | 0.19 |
| Woodworking Machine Setters And Set-up Operators, Exc Sawing | 80 | 0.11 |
| Woodworking Machine Operators And Tenders, Except Sawing | 205 | 0.28 |
| Printing, Binding And Related Workers | 690 | 0.92 |
| Offset Lithographic Press Setters | 125 | 0.17 |
| All Other Printing Related Setters And Set-up Operators | 85 | 0.11 |
| Typesetting And Composing Machine Operators And Tenders | 85 | 0.11 |
| Printing Press Machine Operators | 270 | 0.36 |
| All Other Printing, Binding, Related Machine Ops And Tenders | 125 | 0.17 |
| Textile, Related Setters, Operators And Other Related Workers | 535 | 0.71 |
| Textile Machine Ops, Tenders - Winding, Twisting, Knitting | 95 | 0.13 |
| Sewing Machine Operators, Garment | 180 | 0.24 |
| Sewing Machine Operators, Non-garment | 55 | 0.07 |
| Laundry And Drycleaning Machine Operators | 150 | 0.20 |
| Pressing Machine Operators, Textile | 55 | 0.07 |
| Other Machine Setters, Set-up Operators, Operators, Tenders | 2175 | 2.93 |
| Paper Goods Machine Setters And Set-up Operators | 125 | 0.17 |
| Boiler Operators And Tenders, Low Pressure | 55 | 0.07 |
| Chemical Equipment Controllers And Operators | 60 | 0.08 |
| Cutting And Slicing Machine Setters And Set-up Operators | 50 | 0.07 |
| Cutting And Slicing Machine Operators | 125 | 0.17 |
| Coating, Painting, Spraying Machine Setters, Set-up Operators | 105 | 0.14 |
| Coating, Painting And Spraying Machine Operators And Tenders | 305 | 0.41 |
| Cementing And Gluing Machine Operators And Tenders | 155 | 0.21 |
| Separatng, Filterng, Clarifyng, Precipitatng, Still Mach Ops | 110 | 0.15 |
| Crushing, Grinding, Mixing, Blending Machine Ops And Tenders | 145 | 0.20 |
| Extrudng, Formng, Pressng, Compactng Mach Setters, Set-up Ops | 60 | 0.08 |
| Extruding, Forming, Pressing, Compacting Machine Ops, Tenders | 50 | 0.07 |
| Packaging And Filling Machine Operators | 255 | 0.34 |
| All Other Machine Operators | 575 | 0.77 |
| (Assemblers & other Hand Workers) | | |
| Precision Assemblers | 695 | 0.94 |
| Machine Builders And Other Precision Machine | 105 | 0.14 |
| Electromechanical Equipment Assemblers - Prec | 280 | 0.38 |
| Electrical And Electronic Equipment Assembler | 310 | 0.42 |
| Other Hand Workers, Including Assemblers And Fabricators | 2400 | 3.22 |
| Welders And Cutters | 155 | 0.21 |
| Cutters And Trimmers, Hand | 90 | 0.12 |
| Painting, Coating And Decorating Workers - Hand | 55 | 0.07 |
| Grinding And Polishing Workers, Hand | 115 | 0.16 |
| Assemblers, Fabricators - Exc Mach, Electrcel, Electrnc, Prec | 1565 | 2.10 |
| All Other Hand Workers | 420 | 0.56 |
| Plant And Systems Occupations | 125 | 0.17 |
| Water And Liquid Waste Treatment Plant And System Operators | 50 | 0.07 |
| All Other Plant And System Operators | 75 | 0.10 |

**Table A:
Northern Worcester
Employment
by Occupation**

| | | Employment | Percent Distribution |
|--|---|------------|-------------------------|
| (Transportation & Material Moving Machine & Vehicle Operators) | Motor Vehicle Operators | 2345 | 3.15 |
| | Truck Drivers, Heavy | 895 | 1.20 |
| | Truck Drivers, Light - Including Delivery And Route Drivers | 745 | 1.00 |
| | Bus Drivers | 260 | 0.35 |
| | Bus Drivers, School | 230 | 0.31 |
| | Taxi Drivers And Chauffeurs | 100 | 0.13 |
| | Driver/sales Workers | 115 | 0.16 |
| | All Other Transportation And Related Workers | 470 | 0.63 |
| | Service Station Attendants | 345 | 0.46 |
| | All Other Transportation Workers | 125 | 0.17 |
| | Material Moving Equipment Operators | 645 | 0.87 |
| | Excavating And Loading Machine Operators | 70 | 0.09 |
| | Industrial Truck And Tractor Operators | 295 | 0.40 |
| | Operating Engineers | 95 | 0.13 |
| | All Other Material Moving Equipment Operators | 185 | 0.25 |
| (Helpers, Laborers & Material Movers- Hand) | Constructive Trades, Extractive Worker Help- s | 500 | 0.67 |
| | Helpers, All Other Construction Trades | 500 | 0.67 |
| | Machine Feeders And Offbearers | 310 | 0.42 |
| | Machine Feeders And Offbearers | 310 | 0.42 |
| | All Other Helpers, Laborers, Material Movers - Hand | 2645 | 3.55 |
| | Hand Packers And Packagers | 725 | 0.97 |
| | Vehicle Washers And Equipment Cleaners | 50 | 0.07 |
| | All Other Helpers, Laborers, Movers - Hand | 1870 | 2.51 |

Table B:
Northern Worcester
Employment in
Selected Occupations
by Industry

| | | | Employment | Percent Distribution |
|------------------------------------|---|--|------------|----------------------|
| Managerial & Executive Occupations | o | Financial Managers | 680 | 100.00 |
| | | Finance, Insurance And Real Estate Service | 170 | 25.00 |
| | | Construction | 155 | 22.79 |
| | | Nondurable Goods Manufacturing | 90 | 13.23 |
| | | All Other Durable Goods Manufacturing | 85 | 12.50 |
| | | All Other Machinery, Except Electrical | 60 | 8.82 |
| | | Local Government, Except Education And Hospitals | 55 | 8.09 |
| | o | Purchasing Managers | 185 | 100.00 |
| | | Wholesale And Retail Trade | 125 | 67.57 |
| | o | Marketing, Advertising And Related Managers | 300 | 100.00 |
| | | Nondurable Goods Manufacturing | 75 | 25.00 |
| | | Service | 75 | 25.00 |
| | | Durable Goods Manufacturing | 70 | 23.33 |
| | | Wholesale And Retail Trade | 50 | 16.66 |
| | o | Administrative Service Managers | 475 | 100.00 |
| | | Local Government, Except Education And Hospitals Service | 365 | 76.84 |
| | | | 80 | 16.84 |
| | o | Engineering, Mathematical And Natural Science Managers | 210 | 100.00 |
| | | All Other Machinery, Except Electrical | 70 | 33.33 |
| | | Nondurable Goods Manufacturing | 55 | 26.19 |
| | | All Other Durable Goods Manufacturing | 50 | 23.81 |
| | o | Education Administrators | 315 | 100.00 |
| | | Elementary And Secodary Schools | 200 | 63.49 |
| | | All Other Educational Services | 100 | 31.75 |
| | o | Industrial Production Managers | 340 | 100.00 |
| | | All Other Durable Goods Manufacturing | 145 | 42.65 |
| | | All Other Nondurable Goods Manufacturing | 95 | 27.94 |
| | | Office Computing Machinery | 50 | 14.70 |
| | | Miscellaneous Plastics Products | 50 | 14.71 |
| | o | Construction Managers | 190 | 100.00 |
| | | General Building Contractors - Residential Buildings | 75 | 39.47 |
| | | Special Trade Constrctors | 75 | 39.48 |
| | o | General Managers And Top Executives | 2795 | 100.00 |
| | | All Other Service | 270 | 9.66 |
| | | All Other Durable Goods Manufacturing | 205 | 7.34 |
| | | All Other Wholesale And Retail Trade | 195 | 6.98 |
| | | Eating And Drinking Places | 185 | 6.62 |
| | | Finance, Insurance And Real Estate | 165 | 5.90 |
| | | Misc. Retail Stores | 160 | 5.73 |
| | | All Other Nondurable Goods Manufacturing | 155 | 5.55 |
| | | Special Trade Constrctors | 135 | 4.83 |
| | | Wholesale Trade-durable Goods | 130 | 4.65 |
| | | Wholesale Trade-nondurable Goods | 125 | 4.47 |

**Table B:
Northern Worcester
Employment in
Selected Occupations
by Industry**

| | | Employment | Percent Distribution |
|---|--|------------|-------------------------|
| | Food Stores | 125 | 4.47 |
| | Miscellaneous Plastics Products | 115 | 4.11 |
| | Automotive Dealers And Service Stations | 100 | 3.58 |
| | All Other Health Services | 95 | 3.40 |
| | All Other Machinery, Except Electrical | 90 | 3.22 |
| | Communication Equipment | 90 | 3.22 |
| | Social Services | 90 | 3.22 |
| | Building Materials And Garden Supplies | 85 | 3.04 |
| | General Building Contractors - Residential Buildings | 75 | 2.68 |
| | Business Services | 75 | 2.68 |
| | Commercial Printing | 55 | 1.97 |
| Professional & Technical Occupations | o Accountants And Auditors | 370 | 100.00 |
| | Service | 110 | 29.73 |
| | Wholesale And Retail Trade | 65 | 17.57 |
| | Nondurable Goods Manufacturing | 60 | 16.22 |
| | o Electrical And Electronic Engineers | 175 | 100.00 |
| | All Other Durable Goods Manufacturing | 80 | 45.71 |
| | Office Computing Machinery | 65 | 37.14 |
| | o Mechanical Engineers | 140 | 100.00 |
| | Durable Goods Manufacturing | 70 | 50.00 |
| | Nondurable Goods Manufacturing | 55 | 39.29 |
| | o Drafters | 125 | 100.00 |
| | Durable Goods Manufacturing | 65 | 52.00 |
| | o Social Workers, Medical And Non-medical | 280 | 100.00 |
| | Social Services | 135 | 48.21 |
| | All Other Health Services | 75 | 26.79 |
| | Elementary And Secodary Schools | 70 | 25.00 |
| | o College And University Faculty | 675 | 100.00 |
| | All Other Educational Services | 405 | 60.00 |
| | Elementary And Secodary Schools | 255 | 37.78 |
| | o Teachers, Preschool And Kindergarden | 185 | 100.00 |
| | Elementary And Secondary Schools | 110 | 59.46 |
| | Social Services | 75 | 40.54 |
| | o Teachers, Elementary | 985 | 100.00 |
| | Elementary And Secodary Schools | 970 | 98.48 |
| | o Teachers, Secondary School | 1035 | 100.00 |
| | Elementary And Secondary Schools | 1035 | 100.00 |
| | o Teachers, Special Education | 340 | 100.00 |
| | Elementary And Secondary Schools | 340 | 100.00 |

Table B:
Northern Worcester
Employment in
Selected Occupations
by Industry

| | | Employment | Percent Distribution |
|----------------------------------|--|------------|-------------------------|
| Marketing & Sales Occupations | o Teacher Aides, Paraprofessional | 285 | 100.00 |
| | Elementary And Secondary Schools | 280 | 98.25 |
| | o Registered Nurses | 1040 | 100.00 |
| | Hospitals | 745 | 71.64 |
| | All Other Health Services | 140 | 13.46 |
| | All Other Service | 90 | 8.65 |
| | Nursing And Personal Care Facilities | 65 | 6.25 |
| | o Licensed Practical Nurses | 370 | 100.00 |
| | Nursing And Personal Care Facilities | 150 | 40.54 |
| | Hospitals | 140 | 37.84 |
| | All Other Service | 80 | 21.62 |
| | o Medical And Clinical Laboratory Technologists And Technician | 155 | 100.00 |
| | Hospitals | 125 | 80.65 |
| | o Sales Supervisors | 515 | 100.00 |
| | All Other Wholesale And Retail Trade | 145 | 28.15 |
| | Food Stores | 90 | 17.48 |
| | Nondurable Goods Manufacturing | 80 | 15.53 |
| | Misc. Retail Stores | 80 | 15.53 |
| | o Sales Reps, Scientific And Related Products And Services | 480 | 100.00 |
| | Office Computing Machinery | 140 | 29.17 |
| | All Other Nondurable Goods Manufacturing | 85 | 17.71 |
| | Wholesale Trade-durable Goods | 75 | 15.62 |
| | All Other Durable Goods Manufacturing | 70 | 14.58 |
| | Paper And Allied Products | 55 | 11.46 |
| | o Sales Reps, Exc Scientific And Related Products Or Services | 645 | 100.00 |
| | Wholesale Trade-nondurable Goods | 145 | 22.48 |
| | Wholesale Trade-durable Goods | 140 | 21.70 |
| | All Other Nondurable Goods Manufacturing | 85 | 13.18 |
| | All Other Durable Goods Manufacturing | 75 | 11.63 |
| | Commercial Printing | 70 | 10.85 |
| | Communication Equipment | 55 | 8.53 |
| | o Retail trade Salesrepresentatives | 2645 | 100.00 |
| | All Other Wholesale And Retail Trade | 940 | 35.54 |
| | Misc. Retail Stores | 625 | 23.63 |
| | Department Stores | 470 | 17.77 |
| | Building Materials And Garden Supplies | 240 | 9.07 |
| | Food Stores | 200 | 7.56 |
| | Automotive Dealers And Service Stations | 160 | 6.05 |
| | o Salespersons, Parts | 230 | 100.00 |
| | Automotive Dealers And Service Stations | 150 | 65.22 |
| | Wholesale Trade-durable Goods | 60 | 26.09 |
| | o Stock Clerks, Sales Floor | 1045 | 100.00 |
| | Food Stores | 580 | 55.50 |
| | Misc. Retail Stores | 235 | 22.49 |
| | All Other Wholesale And Retail Trade | 170 | 16.27 |

**Table B:
Northern Worcester
Employment in
Selected Occupations
by Industry**

| | | Employment | Percent Distribution |
|--|---|-------------------|---------------------------------|
| Clerical & Administrative Support Occupations | o Cashiers | 2150 | 100.00 |
| | Food Stores | 870 | 40.47 |
| | Misc. Retail Stores | 355 | 16.51 |
| | Eating And Drinking Places | 310 | 14.42 |
| | State Government, Except Education And Hospitals | 165 | 7.68 |
| | Department Stores | 140 | 6.51 |
| | All Other Wholesale And Retail Trade | 110 | 5.12 |
| | Service | 105 | 4.88 |
| | Building Materials And Garden Supplies | 80 | 3.72 |
| | o First Line Supervisors - Clerical And Administrative Clerks | 845 | 100.00 |
| | Wholesale And Retail Trade | 195 | 23.08 |
| | Finance, Insurance And Real Estate | 160 | 18.94 |
| | Service | 135 | 15.98 |
| | Transportation And Public Utilities | 120 | 14.20 |
| | All Other Durable Goods Manufacturing | 70 | 8.28 |
| | Nondurable Goods Manufacturing | 70 | 8.28 |
| | Communication Equipment | 55 | 6.51 |
| | o Tellers | 640 | 100.00 |
| | Finance, Insurance And Real Estate | 640 | 100.00 |
| | o Teacher Aides And Education Assistants | 125 | 100.00 |
| | Elementary And Secondary Schools | 95 | 76.00 |
| | o Secretaries | 1735 | 100.00 |
| | All Other Service | 225 | 12.97 |
| | Wholesale And Retail Trade | 170 | 9.80 |
| | Elementary And Secodary Schools | 165 | 9.51 |
| | All Other Nondurable Goods Manufacturing | 130 | 7.49 |
| | Local Government, Except Education And Hospitals | 130 | 7.49 |
| | Finance, Insurance And Real Estate | 120 | 6.92 |
| | All Other Durable Goods Manufacturing | 110 | 6.34 |
| | All Other Machinery, Except Electrical | 100 | 5.76 |
| | Special Trade Constructors | 90 | 5.19 |
| | Communication Equipment | 80 | 4.61 |
| | All Other Construction | 75 | 4.32 |
| | Miscellaneous Plastics Products | 75 | 4.32 |
| | Social Services | 75 | 4.32 |
| | Business Services | 65 | 3.75 |
| | Hospitals | 65 | 3.75 |
| | o Receptionists And Information Clerks | 390 | 100.00 |
| | All Other Health Services | 170 | 43.59 |
| | All Other Service | 105 | 26.92 |
| | o Order Clerks - Materials, Merchandise And Service | 185 | 100.00 |
| | Wholesale And Retail Trade | 80 | 43.25 |
| | Nondurable Goods Manufacturing | 55 | 29.73 |

Table B:
Northern Worcester
Employment in
Selected Occupations
by Industry

| | | Employment | Percent Distribution |
|---|--|------------|-------------------------|
| o | Bookkeeping, Accounting, Auditing Clerks | 1505 | 100.00 |
| | All Other Service | 205 | 13.62 |
| | All Other Wholesale And Retail Trade | 170 | 11.29 |
| | Nondurable Goods Manufacturing | 155 | 10.30 |
| | All Other Durable Goods Manufacturing | 150 | 9.97 |
| | Special Trade Constructors | 120 | 7.97 |
| | Local Government, Except Education And Hospitals | 100 | 6.64 |
| | Misc. Retail Stores | 85 | 5.65 |
| | Transportation And Public Utilities | 80 | 5.32 |
| | Finance, Insurance And Real Estate | 80 | 5.32 |
| | Wholesale Trade-nondurable Goods | 60 | 3.99 |
| | Building Materials And Garden Supplies | 60 | 3.99 |
| | All Other Health Services | 60 | 3.99 |
| | General Building Contractors - Residential Buildings | 55 | 3.65 |
| | Communication Equipment | 55 | 3.65 |
| | Automotive Dealers And Service Stations | 50 | 3.32 |
| o | Billing, Cost And Rate Clerks | 220 | 100.00 |
| | Service | 65 | 29.55 |
| | Wholesale And Retail Trade | 55 | 25.00 |
| | Nondurable Goods Manufacturing | 50 | 22.73 |
| o | General Office Clerk | 1425 | 100.00 |
| | All Other Wholesale And Retail Trade | 200 | 14.04 |
| | Local Government, Except Education And Hospitals | 165 | 11.58 |
| | Finance, Insurance And Real Estate | 150 | 10.53 |
| | All Other Service | 135 | 9.47 |
| | Durable Goods Manufacturing | 110 | 7.72 |
| | Transportation And Public Utilities | 105 | 7.37 |
| | All Other Educational Services | 105 | 7.37 |
| | Nondurable Goods Manufacturing | 90 | 6.32 |
| | Automotive Dealers And Service Stations | 75 | 5.26 |
| | Hospitals | 70 | 4.91 |
| | Wholesale Trade-nondurable Goods | 65 | 4.56 |
| | Special Trade Constructors | 60 | 4.21 |
| | Elementary And Secondary Schools | 50 | 3.51 |
| o | Production, Planning, Expediting Clerks | 270 | 100.00 |
| | All Other Durable Goods Manufacturing | 80 | 29.63 |
| | Commercial Printing | 60 | 22.22 |
| | All Other Nondurable Goods Manufacturing | 55 | 20.37 |
| | Office Computing Machinery | 50 | 18.52 |
| o | Stock Clerks - Stockroom, Warehouse And Storage Yard | 725 | 100.00 |
| | Trucking And Warehousing | 200 | 27.58 |
| | All Other Wholesale And Retail Trade | 190 | 26.21 |
| | Building Materials And Garden Supplies | 130 | 17.93 |
| | All Other Machinery, Except Electrical | 75 | 10.34 |
| | Nondurable Goods Manufacturing | 50 | 6.90 |
| o | Traffic, Shipping And Receiving Clerks | 530 | 100.00 |
| | All Other Durable Goods Manufacturing | 135 | 25.47 |
| | All Other Nondurable Goods Manufacturing | 95 | 17.93 |
| | All Other Wholesale And Retail Trade | 80 | 15.09 |
| | All Other Machinery, Except Electrical | 70 | 13.21 |

**Table B:
Northern Worcester
Employment in
Selected Occupations
by Industry**

| | | Employment | Percent Distribution |
|---|--------------------------------------|------------|-------------------------|
| Service Occupations | o Guards And Watch Guards | 490 | 100.00 |
| | Business Services | 285 | 58.17 |
| | All Other Service | 85 | 17.35 |
| o Bartenders | | 455 | 100.00 |
| | Eating And Drinking Places | 280 | 61.54 |
| | Service | 175 | 38.46 |
| o Waiters And Waitresses | | 1505 | 100.00 |
| | Eating And Drinking Places | 1220 | 81.06 |
| | All Other Service | 205 | 13.62 |
| | Hospitals | 60 | 3.99 |
| o Dining Room, Counter And Cafe Attendants | | 430 | 100.00 |
| | Eating And Drinking Places | 260 | 60.46 |
| | Service | 90 | 20.93 |
| | Food Stores | 65 | 15.12 |
| o Cooks, Restaurant | | 325 | 100.00 |
| | Eating And Drinking Places | 285 | 87.69 |
| o Cooks, Institution Or Cafe | | 295 | 100.00 |
| | Elementary And Secodary Schools | 130 | 44.07 |
| | Nursing And Personal Care Facilities | 70 | 23.73 |
| | All Other Service | 55 | 18.64 |
| o Cooks, Speciality Fast Food And Fast Food | | 345 | 100.00 |
| | Eating And Drinking Places | 305 | 88.40 |
| o Food Preparation Workers | | 640 | 100.00 |
| | Eating And Drinking Places | 260 | 40.63 |
| | Elementary And Secodary Schools | 140 | 21.87 |
| | Nursing And Personal Care Facilities | 110 | 17.19 |
| | All Other Service | 85 | 13.28 |
| o Nurse Aides, Orderlies And Attendants | | 825 | 100.00 |
| | Nursing And Personal Care Facilities | 605 | 73.33 |
| | Hospitals | 130 | 15.76 |
| | All Other Service | 90 | 10.91 |
| o Home Health Aides | | 240 | 100.00 |
| | Nursing And Personal Care Facilities | 150 | 62.50 |
| | All Other Health Services | 75 | 31.25 |
| o Janitors And Cleaners | | 1085 | 100.00 |
| | Elementary And Secondary Schools | 250 | 23.04 |
| | Business Services | 205 | 18.90 |
| | Wholesale And Retail Trade | 140 | 12.90 |
| | Nondurable Goods Manufacturing | 105 | 9.68 |
| | All Other Health Services | 80 | 7.37 |

Table B:
Northern Worcester
Employment in
Selected Occupations
by Industry

| | | Employment | Percent Distribution |
|---|--|------------|----------------------|
| Prod., Construction & Machining Occupations | All Other Educational Services | 80 | 7.37 |
| | All Other Service | 80 | 7.37 |
| | Communication Equipment | 55 | 5.07 |
| | o First Line Supervisors - Production And Related | 715 | 100.00 |
| | Miscellaneous Plastics Products | 160 | 22.38 |
| | All Other Durable Goods Manufacturing | 110 | 15.38 |
| | All Other Machinery, Except Electrical | 100 | 13.99 |
| | All Other Nondurable Goods Manufacturing | 95 | 13.29 |
| | Household Furniture | 70 | 9.79 |
| | Fabricated Metal Products | 65 | 9.09 |
| | Commercial Printing | 60 | 8.39 |
| | Communication Equipment | 55 | 7.69 |
| | o Precision And Production Inspectors | 820 | 100.00 |
| | Communication Equipment | 235 | 28.66 |
| | Miscellaneous Plastics Products | 200 | 24.39 |
| | All Other Durable Goods Manufacturing | 165 | 20.12 |
| | All Other Machinery, Except Electrical | 120 | 14.63 |
| | o Machinery Maintenance Mechanics | 180 | 100.00 |
| | Miscellaneous Plastics Products | 90 | 50.00 |
| | Durable Goods Manufacturing | 50 | 27.78 |
| | o Maintenance Repairers, General Utility | 1050 | 100.00 |
| | Local Government, Except Education And Hospitals Service | 340 | 32.38 |
| | | 210 | 20.00 |
| | All Other Nondurable Goods Manufacturing | 120 | 11.43 |
| | Durable Goods Manufacturing | 80 | 7.62 |
| | Miscellaneous Plastics Products | 75 | 7.14 |
| | State Government, Except Education And Hospitals | 75 | 7.15 |
| | Wholesale And Retail Trade | 50 | 4.76 |
| | Finance, Insurance And Real Estate | 50 | 4.76 |
| | o Automotive Mechanics | 455 | 100.00 |
| | Automotive Dealers And Service Stations | 310 | 68.13 |
| | All Other Wholesale And Retail Trade | 60 | 13.19 |
| | Service | 55 | 12.09 |
| | o Automotive Body And Related Repairers | 295 | 100.00 |
| | Service | 205 | 69.49 |
| | Automotive Dealers And Service Stations | 80 | 27.12 |
| | o Heating, Air Conditioning, Refrigeration Mechs, Installers | 150 | 100.00 |
| | Wholesale And Retail Trade | 55 | 36.67 |
| | Special Trade Constructors | 50 | 33.33 |
| | o Carpenters | 795 | 100.00 |
| | General Building Contractors - Residential Buildings | 425 | 53.46 |
| | Special Trade Constructors | 140 | 17.61 |
| | All Other Construction | 100 | 12.58 |
| | Paper And Allied Products | 70 | 8.80 |

Table B:
Northern Worcester
Employment in
Selected Occupations
by Industry

| | Employment | Percent Distribution |
|--|------------|----------------------|
| o Drywall Installers And Tapers | 230 | 100.00 |
| Special Trade Constructors | 225 | 97.83 |
| o Electricians | 230 | 100.00 |
| Special Trade Constructors | 170 | 73.91 |
| o Painters, Paperhangers, Construction And Maintenance | 285 | 100.00 |
| Special Trade Constructors | 190 | 66.67 |
| o Plumbers, Pipefitters And Steamfitters | 295 | 100.00 |
| Special Trade Constructors | 245 | 83.05 |
| o Tool And Die Makers | 215 | 100.00 |
| All Other Machinery, Except Electrical | 85 | 39.54 |
| Miscellaneous Plastics Products | 80 | 37.21 |
| o Machinists | 535 | 100.00 |
| All Other Machinery, Except Electrical | 315 | 58.88 |
| All Other Durable Goods Manufacturing | 100 | 18.69 |
| Service | 70 | 13.08 |
| o Sheetmetal Machine Operator | 180 | 100.00 |
| All Other Durable Goods Manufacturing | 115 | 63.89 |
| All Other Machinery, Except Electrical | 50 | 27.78 |
| o Combination Machine Tool Setters, Set-up Ops, Metal, Plastic | 285 | 100.00 |
| Miscellaneous Plastics Products | 240 | 84.21 |
| o Plastic Molding, Casting Machine Operators And Tenders | 1230 | 100.00 |
| Miscellaneous Plastics Products | 1165 | 94.71 |
| Durable Goods Manufacturing | 60 | 4.88 |
| o Printing Press Machine Operators | 270 | 100.00 |
| Commercial Printing | 140 | 51.85 |
| Miscellaneous Plastics Products | 85 | 31.48 |
| o Cutting And Slicing Machine Operators | 125 | 100.00 |
| Paper And Allied Products | 105 | 84.00 |
| All Other Nondurable Goods Manufacturing | 15 | 12.00 |
| o Packaging And Filling Machine Operators | 255 | 100.00 |
| All Other Nondurable Goods Manufacturing | 145 | 56.86 |
| Paper And Allied Products | 70 | 27.45 |
| o Electromechanical Equipment Assemblers - Prec | 280 | 100.00 |
| Communication Equipment | 210 | 75.00 |
| All Other Durable Goods Manufacturing | 70 | 25.00 |

Table B:
Northern Worcester
Employment in
Selected Occupations
by Industry

| | Employment | Percent Distribution |
|---|------------|----------------------|
| o Electrical And Electronic Equipment Assembler | 310 | 100.00 |
| Communication Equipment | 210 | 67.74 |
| All Other Durable Goods Manufacturing | 100 | 32.26 |
| o Assemblers, Fabricators - Exc Mach, Electrcel, Electrnc, Prec | 1565 | 100.00 |
| Miscellaneous Plastics Products | 740 | 47.29 |
| All Other Durable Goods Manufacturing | 310 | 19.81 |
| Household Furniture | 130 | 8.31 |
| Fabricated Metal Products | 115 | 7.35 |
| Office Computing Machinery | 80 | 5.11 |
| Paper And Allied Products | 65 | 4.15 |
| All Other Machinery, Except Electrical | 55 | 3.51 |
| All Other Nondurable Goods Manufacturing | 55 | 3.51 |
| o Truck Drivers, Heavy | 895 | 100.00 |
| Trucking And Warehousing | 280 | 31.29 |
| Wholesale Trade-nondurable Goods | 155 | 17.32 |
| Nondurable Goods Manufacturing | 135 | 15.08 |
| Construction | 80 | 8.94 |
| Durable Goods Manufacturing | 60 | 6.70 |
| Building Materials And Garden Supplies | 60 | 6.70 |
| All Other Wholesale And Retail Trade | 60 | 6.70 |
| Misc. Retail Stores | 50 | 5.59 |
| o Truck Drivers, Light - Including Delivery And Route Drivers | 745 | 100.00 |
| Wholesale And Retail Trade | 265 | 35.57 |
| Trucking And Warehousing | 195 | 26.18 |
| Nondurable Goods Manufacturing | 95 | 12.75 |
| Communication Equipment | 55 | 7.38 |
| o Bus Drivers, School | 230 | 100.00 |
| Transportation And Public Utilities | 180 | 78.26 |
| Service | 50 | 21.74 |
| o Service Station Attendants | 345 | 100.00 |
| Automotive Dealers And Service Stations | 260 | 75.36 |
| Wholesale Trade-nondurable Goods | 60 | 17.39 |
| o Industrial Truck And Tractor Operators | 295 | 100.00 |
| Paper And Allied Products | 75 | 25.43 |
| Miscellaneous Plastics Products | 55 | 18.64 |
| Trucking And Warehousing | 50 | 16.95 |
| o Helpers, All Other Construction Trades | 500 | 100.00 |
| Special Trade Constructors | 315 | 63.00 |
| General Building Contractors - Residential Buildings | 125 | 25.00 |
| All Other Construction | 60 | 12.00 |
| o Machine Feeders And Offbearers | 310 | 100.00 |
| Fabricated Metal Products | 75 | 24.19 |
| All Other Nondurable Goods Manufacturing | 75 | 24.19 |
| Commercial Printing | 70 | 22.58 |
| Paper And Allied Products | 60 | 19.36 |

**Table B:
Northern Worcester
Employment in
Selected Occupations
by Industry**

| | Employment | Percent Distribution |
|--|------------|-------------------------|
| o Hand Packers And Packagers | 725 | 100.00 |
| Miscellaneous Plastics Products | 330 | 45.52 |
| All Other Durable Goods Manufacturing | 155 | 21.38 |
| All Other Nondurable Goods Manufacturing | 95 | 13.10 |
| Wholesale And Retail Trade | 80 | 11.03 |
| Fabricated Metal Products | 55 | 7.59 |
| o All Other Helpers, Laborers, Movers - Hand | 1870 | 100.00 |
| State Government, Except Education And Hospitals | 475 | 25.40 |
| Miscellaneous Plastics Products | 230 | 12.30 |
| All Other Durable Goods Manufacturing | 205 | 10.96 |
| Paper And Allied Products | 185 | 9.89 |
| Local Government, Except Education And Hospitals | 155 | 8.29 |
| All Other Construction | 110 | 5.88 |
| Wholesale Trade-nondurable Goods | 95 | 5.08 |
| General Building Contractors - Residential Buildings | 70 | 3.74 |
| Household Furniture | 70 | 3.74 |
| All Other Nondurable Goods Manufacturing | 70 | 3.74 |
| Trucking And Warehousing | 65 | 3.48 |
| Wholesale Trade-durable Goods | 65 | 3.48 |
| All Other Wholesale And Retail Trade | 60 | 3.21 |

**Table C:
Northern Worcester
Employment in
Selected Industries
by Occupation**

| | | Employment | Percent Distribution |
|-------------------------------------|---|------------|-------------------------|
| Construction Industries | o General Building Contractors - Residential Buildings | 1210 | 100.00 |
| | Carpenters | 425 | 35.12 |
| | Helpers, All Other Construction Trades | 125 | 10.33 |
| | Transportation, Material Moving Machine And Vehicle Operators | 95 | 7.85 |
| | Construction Managers | 75 | 6.20 |
| | General Managers And Top Executives | 75 | 6.20 |
| | All Other Clerical And Administrative Support Workers | 75 | 6.20 |
| | All Other Construction And Extractive Occupations | 70 | 5.78 |
| | All Other Helpers, Laborers, Movers - Hand | 70 | 5.78 |
| | First Line Supervisors - Constuction And Related | 60 | 4.96 |
| | Bookkeeping, Accounting, Auditing Clerks | 55 | 4.55 |
| | o Special Trade Constructors | 2935 | 100.00 |
| | Helpers, All Other Construction Trades | 315 | 10.73 |
| | Plumbers, Pipefitters And Steamfitters | 245 | 8.35 |
| | All Other Construction And Extractive Occupations | 245 | 8.35 |
| | Drywall Installers And Tapers | 220 | 7.50 |
| | Painters, Paperhangers, Construction And Maintenance | 190 | 6.47 |
| | Electricians | 170 | 5.79 |
| | General Managers And Top Executives | 135 | 4.60 |
| | Carpenters | 135 | 4.60 |
| | Bookkeeping, Accounting, Auditing Clerks | 120 | 4.09 |
| | Concrete And Terrazzo Finishers | 95 | 3.24 |
| | Secretaries, Stenographers And Typists | 90 | 3.07 |
| | Roofers | 80 | 2.73 |
| | Construction Managers | 75 | 2.56 |
| | Sheet Metal Workers | 65 | 2.22 |
| | General Office Clerk | 60 | 2.05 |
| | First Line Supervisors - Constuction And Related | 60 | 2.05 |
| | Reinforcing Metal Workers | 60 | 2.05 |
| | Cost Estimators | 55 | 1.87 |
| | Plasterers And Stucco Masons | 55 | 1.87 |
| | All Other Transportation Workers | 55 | 1.87 |
| | Heating, Air Conditioning, Refrigeration Mechs, Installers | 50 | 1.70 |
| | Excavating And Loading Machine Operators | 50 | 1.70 |
| | o All Other Construction | 625 | 100.00 |
| | Carpenters | 100 | 16.00 |
| | Transportation, Material Moving Machine And Vehicle Operators | 95 | 15.20 |
| | Managerial And Administrative Occupations | 90 | 14.40 |
| | All Other Construction And Extractive Occupations | 70 | 11.20 |
| | Helpers, All Other Construction Trades | 65 | 10.40 |
| | All Other Helpers, Laborers, Movers - Hand | 65 | 10.40 |
| | Clerical And Administrative Support Occupations | 55 | 8.80 |
| | Precision Production Occupations | 55 | 8.80 |
| Manufacturing Industries | o Household Furniture | 1715 | 100.00 |
| | Wood Machinists | 160 | 9.33 |
| | Woodworking Machine Operators And Tenders, Except Sawing | 155 | 9.04 |
| | Clerical And Administrative Support Occupations | 150 | 8.75 |
| | All Other Precision Workers | 130 | 7.58 |
| | Assemblers, Fabricators - Exc Mach, Electrcal, Electrmc, Prec | 130 | 7.58 |
| | Helpers, Laborers And Related | 130 | 7.58 |
| | Sawing Machine Operators | 120 | 7.00 |
| | Cabinetmakers And Bench Carpenters | 100 | 5.83 |
| | Managerial And Administrative Occupations | 95 | 5.54 |

**Table C:
Northern Worcester
Employment in
Selected Industries
by Occupation**

| | Employment | Percent Distribution |
|---|------------|-------------------------|
| Furniture Finishers | 95 | 5.54 |
| All Other Machine Operators | 95 | 5.54 |
| First Line Supervisors - Production And Related | 70 | 4.08 |
| Hand Working Occupations, Including Assemblers, Fabricators | 65 | 3.79 |
| Woodworking Machine Setters And Set-up Operators, Exc Sawing | 55 | 3.21 |
| Coating, Painting And Spraying Machine Operators And Tenders | 50 | 2.91 |
| o Fabricated Metal Products | 1250 | 100.00 |
| All Other Metal, Plastic Machine Setters, Set-up Operators | 140 | 11.20 |
| All Other Metal And Plastic Machine Operators And Tenders | 140 | 11.20 |
| All Other Precision Metal Workers | 125 | 10.00 |
| Assemblers, Fabricators - Exc Mach, Electrcel, Electrmc, Prec | 115 | 9.20 |
| Clerical And Administrative Support Occupations | 110 | 8.80 |
| Managerial And Administrative Occupations | 95 | 7.60 |
| Machine Feeders And Offbearers | 75 | 6.00 |
| Professional, Paraprofessional And Technical Occupations | 70 | 5.60 |
| First Line Supervisors - Production And Related | 65 | 5.20 |
| All Other Hand Workers | 65 | 5.20 |
| Hand Packers And Packagers | 55 | 4.40 |
| All Other Precision Workers | 50 | 4.00 |
| All Other Machine Operators | 50 | 4.00 |
| o Office Computing Machinery | 1230 | 100.00 |
| All Other Clerical And Administrative Support Workers | 205 | 16.67 |
| Management Support Occupations | 140 | 11.38 |
| Sales Reps, Scientific And Related Products And Services | 140 | 11.38 |
| Precision Production Occupations | 100 | 8.13 |
| All Other Professional, Paraprofessional And Technicians | 95 | 7.72 |
| All Other Managers And Administrators | 85 | 6.91 |
| Assemblers, Fabricators - Exc Mach, Electrcel, Electrmc, Prec | 85 | 6.91 |
| Engineering And Related Technicians And Technologists | 70 | 5.69 |
| Electrical And Electronic Engineers | 65 | 5.28 |
| Industrial Production Managers | 50 | 4.07 |
| Production, Planning, Expediting Clerks | 50 | 4.07 |
| o All Other Machinery, Except Electrical | 2305 | 100.00 |
| Machinists | 310 | 13.45 |
| All Other Clerical And Administrative Support Workers | 225 | 9.76 |
| All Other Managers And Administrators | 150 | 6.51 |
| All Other Metal, Plastic Machine Setters, Set-up Operators | 145 | 6.29 |
| Machine Builders And Other Precision Machine | 100 | 4.34 |
| Numerical Control Machine Tool Operators, Tenders, Met, Plas | 90 | 3.90 |
| All Other Hand Workers | 90 | 3.90 |
| Precision And Production Inspectors | 85 | 3.69 |
| Tool And Die Makers | 85 | 3.69 |
| All Other Precision Workers | 85 | 3.69 |
| General Managers And Top Executives | 80 | 3.47 |
| First Line Supervisors - Production And Related | 75 | 3.25 |
| All Other Metal And Plastic Machine Operators And Tenders | 65 | 2.82 |
| Engineering And Related Technicians And Technologists | 60 | 2.60 |
| Grinding And Polishing Workers, Hand | 60 | 2.60 |
| Management Support Occupations | 55 | 2.39 |
| Engineers | 55 | 2.39 |
| Secretaries, Stenographers And Typists | 55 | 2.39 |
| Assemblers, Fabricators - Exc Mach, Electrcel, Electrmc, Prec | 55 | 2.39 |
| Sales And Related Occupations | 50 | 2.17 |
| Stock Clerks - Stockroom, Warehouse And Storage Yard | 50 | 2.17 |
| Traffic, Shipping And Receiving Clerks | 50 | 2.17 |
| Sheet Metal Workers | 50 | 2.17 |
| Sheetmetal Machine Operator | 50 | 2.17 |

Table C:
Northern Worcester
Employment in
Selected Industries
by Occupation

| | Employment | Percent Distribution |
|---|------------|----------------------|
| o Communication Equipment | 1595 | 100.00 |
| Mechanics, Installers And Repairers | 255 | 15.99 |
| Precision And Production Inspectors | 235 | 14.73 |
| Electromechanical Equipment Assemblers - Prec | 210 | 13.16 |
| Electrical And Electronic Equipment Assembler | 210 | 13.16 |
| General Managers And Top Executives | 90 | 5.64 |
| Secretaries, Stenographers And Typists | 80 | 5.02 |
| Professional, Paraprofessional And Technical Occupations | 55 | 3.45 |
| Sales Reps, Exc Scientific And Related Products Or Services | 55 | 3.45 |
| First Line Supervisors - Clerical And Administrative Clerks | 55 | 3.45 |
| Bookkeeping, Accounting, Auditing Clerks | 55 | 3.45 |
| Janitors And Cleaners | 55 | 3.45 |
| First Line Supervisors - Production And Related | 55 | 3.45 |
| Truck Drivers, Light - Including Delivery And Route Drivers | 55 | 3.45 |
| o All Other Durable Goods Manufacturing | 3435 | 100.00 |
| Assemblers, Fabricators - Exc Mach, Electrcl, Electrnc, Prec | 310 | 9.03 |
| All Other Hand Workers | 225 | 6.55 |
| All Other Machine Operators | 205 | 5.97 |
| All Other Metal, Plastic Machine Setters, Set-up Operators | 190 | 5.53 |
| All Other Clerical And Administrative Support Workers | 165 | 4.80 |
| All Other Precision Workers | 160 | 4.66 |
| Extruding, Drawing Machine Setters, Set-up Ops, Metal And Pla | 160 | 4.66 |
| Precision And Production Inspectors | 130 | 3.78 |
| All Other Helpers, Laborers, Movers - Hand | 125 | 3.64 |
| General Managers And Top Executives | 120 | 3.49 |
| All Other Managers And Administrators | 120 | 3.49 |
| First Line Supervisors - Production And Related | 110 | 3.20 |
| Sales And Related Occupations | 105 | 3.06 |
| All Other Metal And Plastic Machine Operators And Tenders | 105 | 3.06 |
| Traffic, Shipping And Receiving Clerks | 85 | 2.47 |
| Mechanics, Installers And Repairers | 85 | 2.47 |
| Electrical And Electronic Equipment Assembler | 85 | 2.47 |
| Hand Packers And Packagers | 85 | 2.47 |
| Sheetmetal Machine Operator | 80 | 2.33 |
| Engineers | 70 | 2.04 |
| All Other Professional, Paraprofessional And Technicians | 65 | 1.89 |
| Bookkeeping, Accounting, Auditing Clerks | 65 | 1.89 |
| All Other Material Recording And Related Workers | 65 | 1.89 |
| Machinists | 65 | 1.89 |
| Industrial Production Managers | 60 | 1.75 |
| Management Support Occupations | 60 | 1.75 |
| Secretaries, Stenographers And Typists | 60 | 1.75 |
| Plastic Molding, Casting Machine Operators And Tenders | 60 | 1.75 |
| Engineering And Related Technicians And Technologists | 55 | 1.60 |
| Woodworking Machine Operators And Tenders, Except Sawing | 50 | 1.46 |
| Truck Drivers, Heavy | 50 | 1.46 |
| o Paper And Allied Products | 2450 | 100.00 |
| All Other Machine Operators | 275 | 11.22 |
| All Other Helpers, Laborers, Movers - Hand | 215 | 8.78 |
| Coating, Painting And Spraying Machine Operators And Tenders | 210 | 8.57 |
| All Other Clerical And Administrative Support Workers | 155 | 6.33 |
| Professional, Paraprofessional And Technical Occupations | 145 | 5.92 |
| Managerial And Administrative Occupations | 130 | 5.31 |
| Cementing And Gluing Machine Operators And Tenders | 130 | 5.31 |
| Paper Goods Machine Setters And Set-up Operators | 125 | 5.10 |
| Cutting And Slicing Machine Operators | 105 | 4.29 |

Table C:
Northern Worcester
Employment in
Selected Industries
by Occupation

| | Employment | Percent Distribution |
|---|------------|----------------------|
| Mechanics, Installers And Repairers | 95 | 3.88 |
| Precision Production Occupations | 85 | 3.47 |
| Material Recording, Scheduling, Dispatching, Distributing | 75 | 3.06 |
| First Line Supervisors, Manager/supers - Prod, Constr, Maint | 75 | 3.06 |
| Industrial Truck And Tractor Operators | 75 | 3.06 |
| Carpenters | 70 | 2.86 |
| Packaging And Filling Machine Operators | 70 | 2.86 |
| All Other Sales And Related Workers | 65 | 2.65 |
| Assemblers, Fabricators - Exc Mach, Electrcal, Electrmc, Prec | 65 | 2.65 |
| Machine Feeders And Offbearers | 60 | 2.45 |
| Sales Reps, Scientific And Related Products And Services | 55 | 2.24 |
| All Other Printing, Binding, Related Machine Ops And Tenders | 50 | 2.04 |
| All Other Material Moving Equipment Operators | 50 | 2.04 |
| o Commercial Printing | 1840 | 100.00 |
| All Other Clerical And Administrative Support Workers | 250 | 13.59 |
| Precision Lithography And Photoengraving Workers | 155 | 8.42 |
| Printing Press Machine Operators | 140 | 7.61 |
| Offset Lithographic Press Setters | 120 | 6.52 |
| All Other Printing, Binding, Related Machine Ops And Tenders | 100 | 5.44 |
| Professional, Paraprofessional And Technical Occupations | 85 | 4.62 |
| All Other Managers And Administrators | 75 | 4.08 |
| All Other Precision Printing Workers | 75 | 4.08 |
| All Other Precision Workers | 75 | 4.08 |
| Sales Reps, Exc Scientific And Related Products Or Services | 70 | 3.80 |
| All Other Machine Operators | 70 | 3.80 |
| Machine Feeders And Offbearers | 70 | 3.80 |
| All Other Sales And Related Workers | 65 | 3.53 |
| First Line Supervisors - Production And Related | 65 | 3.53 |
| Production, Planning, Expediting Clerks | 60 | 3.26 |
| All Other Helpers, Laborers, Movers - Hand | 60 | 3.26 |
| General Managers And Top Executives | 55 | 2.99 |
| All Other Printing Related Setters And Set-up Operators | 55 | 2.99 |
| Typesetting And Composing Machine Operators And Tenders | 55 | 2.99 |
| Electronic Data Processing, Other Office Machine Occupations | 50 | 2.72 |
| o Miscellaneous Plastics Products | 5390 | 100.00 |
| Plastic Molding, Casting Machine Operators And Tenders | 1165 | 21.61 |
| Assemblers, Fabricators - Exc Mach, Electrcal, Electrmc, Prec | 735 | 13.64 |
| Hand Packers And Packagers | 330 | 6.12 |
| All Other Helpers, Laborers, Movers - Hand | 265 | 4.92 |
| All Other Clerical And Administrative Support Workers | 260 | 4.82 |
| Combination Machine Tool Setters, Set-up Ops, Metal, Plastic | 240 | 4.45 |
| All Other Machine Operators | 230 | 4.27 |
| Precision And Production Inspectors | 200 | 3.71 |
| First Line Supervisors - Production And Related | 160 | 2.97 |
| All Other Managers And Administrators | 150 | 2.78 |
| All Other Metal, Plastic Machine Setters, Set-up Operators | 140 | 2.60 |
| All Other Professional, Paraprofessional And Technicians | 135 | 2.50 |
| All Other Metal And Plastic Machine Operators And Tenders | 120 | 2.23 |
| General Managers And Top Executives | 115 | 2.13 |
| Sales And Related Occupations | 100 | 1.86 |
| Plastic Molding, Casting Machine Setters, Set-up Operators | 100 | 1.86 |
| Machinery Maintenance Mechanics | 90 | 1.67 |
| Printing Press Machine Operators | 85 | 1.58 |
| Tool And Die Makers | 80 | 1.48 |
| All Other Precision Workers | 80 | 1.48 |
| Secretaries, Stenographers And Typists | 75 | 1.39 |
| Maintenance Repairers, General Utility | 75 | 1.39 |
| Management Support Occupations | 65 | 1.21 |

Table C:
Northern Worcester
Employment in
Selected Industries
by Occupation

| | | Employment | Percent Distribution |
|--|---|------------|-------------------------|
| | Service Occupations | 65 | 1.21 |
| | Blue Collar Worker Supervisors | 60 | 1.11 |
| | All Other Hand Workers | 60 | 1.11 |
| | Traffic, Shipping And Receiving Clerks | 55 | 1.02 |
| | Industrial Truck And Tractor Operators | 55 | 1.02 |
| | Industrial Production Managers | 50 | 0.93 |
| | All Other Material Moving Equipment Operators | 50 | 0.93 |
| | o All Other Nondurable Goods Manufacturing | 2910 | 100.00 |
| | All Other Machine Operators | 430 | 14.78 |
| | All Other Professional, Paraprofessional And Technicians | 185 | 6.36 |
| | All Other Clerical And Administrative Support Workers | 180 | 6.19 |
| | Sales And Related Occupations | 150 | 5.16 |
| | All Other Managers And Administrators | 135 | 4.64 |
| | Packaging And Filling Machine Operators | 120 | 4.12 |
| | Helpers, Laborers And Related | 120 | 4.12 |
| | General Managers And Top Executives | 115 | 3.95 |
| | Sewing Machine Operators, Garment | 110 | 3.78 |
| | Separatng, Filterng, Clarifyng, Precipitatng, Still Mach Ops | 110 | 3.78 |
| | Food Batchmakers | 105 | 3.61 |
| | Truck Drivers, Heavy | 100 | 3.44 |
| | All Other Precision Workers | 95 | 3.27 |
| | Crushing, Grinding, Mixing, Blending Machine Ops And Tenders | 90 | 3.09 |
| | Secretaries, Stenographers And Typists | 85 | 2.92 |
| | Material Recording, Scheduling, Dispatching, Distributing | 75 | 2.58 |
| | Bookkeeping, Accounting, Auditing Clerks | 70 | 2.41 |
| | Maintenance Repairers, General Utility | 65 | 2.23 |
| | Service Occupations | 60 | 2.06 |
| | First Line Supervisors - Production And Related | 60 | 2.06 |
| | All Other Transportation Workers | 60 | 2.06 |
| | Management Support Occupations | 55 | 1.89 |
| | Chemical Technicians, Technologists, Exc Health, Engineering | 55 | 1.89 |
| | Precision And Production Inspectors | 55 | 1.89 |
| | All Other Mechanics, Installers And Repairers | 55 | 1.89 |
| | Assemblers, Fabricators - Exc Mach, Electrlc, Electrcnc, Prec | 55 | 1.89 |
| Transportation, Communications & Utilities | o Trucking And Warehousing | 1175 | 100.00 |
| | Truck Drivers, Heavy | 280 | 23.83 |
| | Stock Clerks - Stockroom, Warehouse And Storage Yard | 200 | 17.02 |
| | Truck Drivers, Light - Including Delivery And Route Drivers | 195 | 16.60 |
| | All Other Clerical And Administrative Support Workers | 170 | 14.47 |
| | Precision Production Occupations | 75 | 6.38 |
| | Helpers, Laborers And Related | 75 | 6.38 |
| | Managerial And Administrative Occupations | 60 | 5.11 |
| | Industrial Truck And Tractor Operators | 50 | 4.25 |
| | o All Other Transportation And Public Utilities | 1655 | 100.00 |
| | Bus Drivers | 250 | 15.11 |
| | All Other Clerical And Administrative Support Workers | 235 | 14.20 |
| | Bus Drivers, School | 180 | 10.88 |
| | Professional, Paraprofessional And Technical Occupations | 140 | 8.46 |
| | First Line Supervisors - Clerical And Administrative Clerks | 115 | 6.95 |
| | All Other Mechanics, Installers And Repairers | 105 | 6.34 |
| | Taxi Drivers And Chauffeurs | 95 | 5.74 |
| | Managerial And Administrative Occupations | 70 | 4.23 |
| | General Office Clerk | 70 | 4.23 |
| | Electric Powerline Installers And Repairers | 70 | 4.23 |
| | Travel Agents | 55 | 3.32 |
| | All Other Commun Equip Maintainers, Installers, Repairers | 55 | 3.32 |

**Table C:
Northern Worcester
Employment in
Selected Industries
by Occupation**

| | | Employment | Percent Distribution |
|-----------------------------|---|------------|-------------------------|
| Wholesale & Retail Trade | Station Installers And Repairers, Telephone | 55 | 3.32 |
| | Precision Production Occupations | 55 | 3.32 |
| | o Wholesale Trade-durable Goods | 1150 | 100.00 |
| | All Other Clerical And Administrative Support Workers | 200 | 17.39 |
| | Sales Reps, Exc Scientific And Related Products Or Services | 140 | 12.17 |
| | General Managers And Top Executives | 130 | 11.30 |
| | All Other Transportation Workers | 100 | 8.70 |
| | All Other Sales And Related Workers | 90 | 7.83 |
| | Material Recording, Scheduling, Dispatching, Distributing | 80 | 6.96 |
| | Sales Reps, Scientific And Related Products And Services | 75 | 6.52 |
| | Helpers, Laborers And Related | 70 | 6.09 |
| | Salespersons, Parts | 60 | 5.22 |
| | Mechanics, Installers And Repairers | 55 | 4.78 |
| | Precision Production Occupations | 55 | 4.78 |
| | o Wholesale Trade-nondurable Goods | 1550 | 100.00 |
| | All Other Clerical And Administrative Support Workers | 155 | 10.00 |
| | Truck Drivers, Heavy | 155 | 10.00 |
| | Sales Reps, Exc Scientific And Related Products Or Services | 145 | 9.35 |
| | All Other Sales And Related Workers | 145 | 9.35 |
| | General Managers And Top Executives | 125 | 8.07 |
| | Helpers, Laborers And Related | 110 | 7.10 |
| | Machine Setters, Set-up Operators, Operators And Tenders | 85 | 5.48 |
| | All Other Material Moving Equipment Operators | 85 | 5.48 |
| | All Other Material Recording And Related Workers | 70 | 4.52 |
| | General Office Clerk | 65 | 4.19 |
| | Bookkeeping, Accounting, Auditing Clerks | 60 | 3.87 |
| | Service Station Attendants | 60 | 3.87 |
| | Traffic, Shipping And Receiving Clerks | 55 | 3.55 |
| | All Other Managers And Administrators | 50 | 3.23 |
| | All Other Transportation Workers | 50 | 3.23 |
| | o Department Stores | 1125 | 100.00 |
| | Salespersons, Retail Trade | 470 | 41.78 |
| | Clerical And Administrative Support Occupations | 165 | 14.67 |
| | Cashiers | 140 | 12.44 |
| | Managerial And Administrative Occupations | 85 | 7.56 |
| | Mechanics, Installers And Repairers | 65 | 5.78 |
| | Stock Clerks, Sales Floor | 60 | 5.33 |
| | Service Occupations | 50 | 4.44 |
| | o Food Stores | 2425 | 100.00 |
| | Cashiers | 870 | 35.88 |
| | Stock Clerks, Sales Floor | 580 | 23.92 |
| | Salespersons, Retail Trade | 200 | 8.25 |
| | All Other Sales And Related Workers | 145 | 5.98 |
| | General Managers And Top Executives | 125 | 5.15 |
| | All Other Food Service Workers | 105 | 4.33 |
| | Clerical And Administrative Support Occupations | 95 | 3.92 |
| | Butchers And Meat Cutters | 90 | 3.71 |
| | First Line Supervisors And Manager/supervisors - Sales And Re | 85 | 3.50 |
| | Dining Room, Counter And Cafe Attendants | 60 | 2.47 |

Table C:
Northern Worcester
Employment in
Selected Industries
by Occupation

| | | Employment | Percent Distribution |
|-------------------------------------|---|------------|-------------------------|
| | o Automotive Dealers And Service Stations | 1600 | 100.00 |
| | Automotive Mechanics | 305 | 19.06 |
| | Service Station Attendants | 260 | 16.25 |
| | Salespersons, Retail Trade | 160 | 10.00 |
| | Salespersons, Parts | 150 | 9.38 |
| | First Line Supervisors - Mechanics And Repairers | 110 | 6.88 |
| | General Managers And Top Executives | 100 | 6.25 |
| | All Other Clerical And Administrative Support Workers | 100 | 6.25 |
| | Automotive Body And Related Repairers | 80 | 5.00 |
| | General Office Clerk | 70 | 4.38 |
| | Helpers, Laborers And Related | 60 | 3.75 |
| | Bookkeeping, Accounting, Auditing Clerks | 50 | 3.12 |
| | All Other Mechanics, Installers And Repairers | 50 | 3.12 |
| | o Eating And Drinking Places | 4310 | 100.00 |
| | Waiters And Waitresses | 1220 | 28.31 |
| | All Other Food Service Workers | 510 | 11.83 |
| | Cashiers | 310 | 7.19 |
| | Cooks, Speciality Fast Food And Fast Food | 305 | 7.08 |
| | Cooks, Restaurant | 285 | 6.61 |
| | Bartenders | 280 | 6.50 |
| | Dining Room, Counter And Cafe Attendants | 260 | 6.03 |
| | Food Preparation Workers | 260 | 6.03 |
| | General Managers And Top Executives | 185 | 4.29 |
| | Hosts And Hostesses | 120 | 2.79 |
| | Food Service And Lodging Managers | 115 | 2.67 |
| | Clerical And Administrative Support Occupations | 115 | 2.67 |
| | Driver/sales Workers | 75 | 1.74 |
| | All Other Service Supervisors | 65 | 1.51 |
| | All Other Service Workers | 65 | 1.51 |
| Finance, Insurance & Real Estate | o Finance, Insurance And Real Estate | 5460 | 200.00 |
| | Tellers | 640 | 23.44 |
| | All Other Clerical And Administrative Support Workers | 290 | 10.62 |
| | Financial Managers | 170 | 6.23 |
| | General Managers And Top Executives | 165 | 6.04 |
| | First Line Supervisors - Clerical And Administrative Clerks | 155 | 5.68 |
| | General Office Clerk | 150 | 5.50 |
| | Loan Officers And Counselors | 125 | 4.58 |
| | Secretaries, Stenographers And Typists | 120 | 4.40 |
| | All Other Financial Specialists | 110 | 4.03 |
| | New Accounts Clerks | 110 | 4.03 |
| | Sales Agents And Placers, Insurance | 85 | 3.11 |
| | Bookkeeping, Accounting, Auditing Clerks | 80 | 2.93 |
| | Loan And Credit Clerks | 75 | 2.75 |
| | Insurance Policy Processing Clerks | 75 | 2.75 |
| | All Other Managers And Administrators | 70 | 2.56 |
| | All Other Professional, Paraprofessional And Technicians | 70 | 2.56 |
| | Service Occupations | 60 | 2.20 |
| | All Other Sales Representatives, Service | 55 | 2.01 |
| | Maintenance Repairers, General Utility | 50 | 1.83 |
| Service Industries | o Business Services | 1430 | 100.00 |
| | Guards And Watch Guards | 285 | 19.93 |
| | Janitors And Cleaners | 205 | 14.34 |
| | All Other Professional, Paraprofessional And Technicians | 200 | 13.99 |
| | All Other Clerical And Administrative Support Workers | 155 | 10.84 |

**Table C:
Northern Worcester
Employment in
Selected Industries
by Occupation**

| | Employment | Percent Distribution |
|---|------------|-------------------------|
| All Other Managers And Administrators | 90 | 6.29 |
| Sales And Related Occupations | 85 | 5.94 |
| General Managers And Top Executives | 75 | 5.24 |
| Janitors And Cleaners, Including Housekeepers And Maids | 75 | 5.25 |
| Engineers | 65 | 4.54 |
| Secretaries, Stenographers And Typists | 65 | 4.54 |
| Electronic Data Processing, Other Office Machine Occupations | 55 | 3.85 |
| o Nursing And Personal Care Facilities | 1745 | 100.00 |
| Nurse Aides, Orderlies And Attendants | 605 | 34.67 |
| Licensed Practical Nurses | 150 | 8.60 |
| Home Health Aides | 150 | 8.60 |
| Janitors And Cleaners, Including Housekeepers And Maids | 140 | 8.02 |
| Food Preparation Workers | 110 | 6.30 |
| Managerial And Administrative Occupations | 95 | 5.44 |
| All Other Service Workers | 95 | 5.44 |
| All Other Health Professionals And Others | 90 | 5.16 |
| Registered Nurses | 70 | 4.01 |
| Cooks, Institution Or Cafe | 70 | 4.01 |
| Clerical And Administrative Support Occupations | 60 | 3.44 |
| Laundry And Drycleaning Machine Operators | 50 | 2.87 |
| o Hospitals | 2625 | 100.00 |
| Registered Nurses | 745 | 28.38 |
| All Other Clerical And Administrative Support Workers | 235 | 8.95 |
| Managerial And Administrative Occupations | 150 | 5.71 |
| Licensed Practical Nurses | 140 | 5.33 |
| All Other Health Professionals And Others | 130 | 4.95 |
| Nurse Aides, Orderlies And Attendants | 130 | 4.95 |
| Medical And Clinical Laboratory Technologists And Technicians | 125 | 4.76 |
| All Other Food Service Workers | 125 | 4.76 |
| Janitors And Cleaners, Including Housekeepers And Maids | 110 | 4.19 |
| Secretaries, Stenographers And Typists | 105 | 4.00 |
| Radiologic Technicians | 80 | 3.05 |
| All Other Professional, Paraprofessional And Technicians | 80 | 3.05 |
| All Other Therapists | 75 | 2.86 |
| All Other Health Servicers | 75 | 2.86 |
| General Office Clerk | 70 | 2.67 |
| All Other Service Workers | 70 | 2.67 |
| Waiters And Waitresses | 60 | 2.29 |
| Interview Clerks, Except Personnel And Welfare | 50 | 1.91 |
| o All Other Health Services | 1575 | 100.00 |
| All Other Clerical And Administrative Support Workers | 225 | 14.29 |
| All Other Health Professionals And Others | 195 | 12.38 |
| Receptionists And Information Clerks | 160 | 10.16 |
| Registered Nurses | 140 | 8.89 |
| Dental Assistants | 135 | 8.57 |
| Dental Hygienists | 100 | 6.35 |
| Managerial And Administrative Occupations | 95 | 6.03 |
| Physicians And Surgeons | 85 | 5.40 |
| Dentists | 85 | 5.40 |
| All Other Professional, Paraprofessional And Technicians | 75 | 4.76 |
| Medical Secretaries | 70 | 4.44 |
| Home Health Aides | 65 | 4.13 |
| Medical Assistants | 50 | 3.17 |
| All Other Health Servicers | 50 | 3.17 |

**Table C:
Northern Worcester
Employment in
Selected Industries
by Occupation**

| | | Employment | Percent Distribution |
|-------------------|---|------------|-------------------------|
| | o Elementary And Secondary Schools | 5060 | 100.00 |
| | Teachers, Secondary School | 1035 | 20.46 |
| | Teachers, Elementary | 970 | 19.17 |
| | Teachers, Special Education | 340 | 6.72 |
| | Teacher Aides, Paraprofessional | 280 | 5.53 |
| | College And University Faculty | 255 | 5.04 |
| | Janitors And Cleaners | 250 | 4.94 |
| | Education Administrators | 200 | 3.95 |
| | Secretaries, Stenographers And Typists | 165 | 3.26 |
| | All Other Teachers And Related Workers | 145 | 2.87 |
| | Food Preparation Workers | 140 | 2.77 |
| | All Other Professional, Paraprofessional And Technicians | 130 | 2.57 |
| | Cooks, Institution Or Cafe | 130 | 2.57 |
| | Teachers, Preschool And Kindergarden | 110 | 2.17 |
| | All Other Health Professionals And Others | 110 | 2.17 |
| | Teacher Aides And Education Assistants | 95 | 1.88 |
| | Instructors And Coaches, Sports | 85 | 1.68 |
| | All Other Clerical And Administrative Support Workers | 80 | 1.58 |
| | All Other Managers And Administrators | 75 | 1.48 |
| | Social Workers, Medical And Non-medical | 75 | 1.48 |
| | Vocational And Educational Counselors | 75 | 1.48 |
| | All Other Food Service Workers | 75 | 1.48 |
| | Protective Service Occupations | 55 | 1.09 |
| | All Other Transportation Workers | 55 | 1.09 |
| | General Office Clerk | 50 | 0.99 |
| | o Social Services | 1410 | 100.00 |
| | All Other Clerical And Administrative Support Workers | 200 | 14.18 |
| | All Other Service Workers | 140 | 9.93 |
| | Social Workers, Medical And Non-medical | 135 | 9.57 |
| | All Other Managers And Administrators | 115 | 8.16 |
| | Social Service Technicians | 110 | 7.80 |
| | All Other Health Professionals And Others | 100 | 7.09 |
| | General Managers And Top Executives | 90 | 6.38 |
| | Social Welfare Service Aides | 90 | 6.38 |
| | Teachers, Preschool And Kindergarden | 75 | 5.32 |
| | Secretaries, Stenographers And Typists | 75 | 5.32 |
| | All Other Professional, Paraprofessional And Technicians | 70 | 4.97 |
| | All Other Teachers And Related Workers | 65 | 4.61 |
| | Food And Beverage Preparation And Service Workers | 65 | 4.61 |
| | Health Service And Related Occupations | 55 | 3.90 |
| Government | o State Government, Except Education And Hospitals | 1395 | 100.00 |
| | Helpers, Laborers And Related | 475 | 34.05 |
| | Service Occupations | 180 | 12.90 |
| | Cashiers | 165 | 11.83 |
| | Computer Operators, Except Peripheral Equipment | 145 | 10.39 |
| | All Other Transportation Workers | 90 | 6.45 |
| | Hand Working Occupations, Including Assemblers, Fabricators | 80 | 5.74 |
| | All Other Clerical And Administrative Support Workers | 75 | 5.38 |
| | Maintenance Repairers, General Utility | 70 | 5.02 |
| | Mach Maintenance Mechanics, Water Or Power Generation Plant | 50 | 3.58 |
| | o Local Government, Except Education And Hospitals | 2505 | 100.00 |
| | Administrative Service Managers | 365 | 14.57 |
| | Maintenance Repairers, General Utility | 340 | 13.57 |
| | General Office Clerk | 165 | 6.59 |

Table C:
Northern Worcester
Employment in
Selected Industries
by Occupation

| | Employment | Percent Distribution |
|---|-------------------|---------------------------------|
| Helpers, Laborers And Related | 155 | 6.19 |
| Fire Fighters | 145 | 5.79 |
| All Other Professional, Paraprofessional And Technicians | 130 | 5.19 |
| Secretaries, Stenographers And Typists | 130 | 5.19 |
| All Other Clerical And Administrative Support Workers | 130 | 5.19 |
| Police Detectives And Investigators | 115 | 4.59 |
| All Other Management Support Workers | 110 | 4.39 |
| Pub Admin Chief Executives, Legislators, General Administrators | 105 | 4.19 |
| Bookkeeping, Accounting, Auditing Clerks | 100 | 3.99 |
| Assessors | 95 | 3.79 |
| All Other Service Workers | 90 | 3.59 |
| Highway Maintenance Workers | 90 | 3.59 |
| Financial Managers | 55 | 2.20 |
| All Other Construction And Extractive Occupations | 50 | 1.99 |

Notes About the Data

Employment surveys frequently differ in concept and definition and thus make understanding and interpreting the data more difficult. Therefore, it is important to know how data are obtained in order to know how best to use them. The industry and occupational employment data presented in these SDA reports count jobs and are collected from surveys of Massachusetts establishments. Individuals who hold more than one job are counted at each place they work. This section presents more detail explanations of the data published in the tables.

Industry Employment Data

Industry employment data presented in Tables 2, 3, and C, and the top ten industries in Section II are derived from the Employment and Wage Program. Industries covered in this program are defined in terms of the Standard Industrial Classification (SIC) system. The SIC separates establishments' economic activities into broad sectors (manufacturing, construction, retail trade, services, etc.). Each sector is further divided into major groups (2 digit SIC), then into industry groups (3 digit SIC) and finally into industries (4 digit SIC). Revisions to the SIC are made periodically to reflect the economy's changing industrial structure. In 1987, the SIC was revised, taking into account technological changes; institutional changes

such as deregulation in the banking, communications, and transportation industries; and the tremendous expansion in the service sector that occurred since 1972.

Some of the industry employment tables presented in these SDA reports are based on the old 1972 SIC, while others are based on the 1987 SIC revision. Industry employment data in Table 3 and the top ten industries are based on 1989 data and the 1987 SIC revision. Data from 1984 to 1989, showing the average annual employment change, net change and percent change in Table 2 are based on both the 1972 SIC and 1977 supplement, and the 1987 SIC revision. Data from 1984-1987 and 1988-1989 are based on different SICs and therefore, are not strictly comparable. However, since there were no changes to the SIC at the sector level, these measures of the SDA's industry employment change present no significant comparability problems.

Table C, presenting detailed industry employment by occupation, is derived from the Occupational Employment Statistics Survey. Industry employment is based on 1987 data and the 1972 SIC and the 1977 supplement. Staffing patterns presented in Table C are published for approximately 25 industries with a thousand or more workers.

Industry staffing patterns are presented for 2 and 3 digit industries, and major groupings of industries such as durable and nondurable goods industries. Industry staffing patterns that could violate employer confidentiality are collapsed into residual industries within the sector. As a result not all residual industries are strictly comparable across all SDAs.

Occupational Employment Data

Occupational employment estimates presented in these SDA reports are derived from data collected by the Occupational Employment Statistic (OES) program. OES data are obtained from surveys of employment by occupation for over 300 industries. Employers include both part-time and full-time workers for the payroll periods on the 12th of April, May, and June.

The classification systems used in this survey were the Standard Occupational Classification (SOC) system and the 1972 SIC. The SOC was used to develop the definitions of the occupations included and the 1972 SIC was used to define the industries.

Occupational data in these SDA reports are not strictly comparable to those published in the Current Population Survey (CPS), a monthly survey of approximately 59,500 individuals conducted by the U.S. Bureau of the Census. Primarily because of the two surveys' differences in concepts and classification systems (for example, the CPS counts individuals whereas the OES survey is a count of jobs, therefore, individuals who hold more than one job are counted differently in the two surveys,) employment comparisons should not be made between the two.

Comparisons can be made for large occupations among the SDAs and between individual SDAs and the state. In general, however, it is important to remember that the occupational estimates published in this report are intended to be used as a guide to local job markets, and should not be viewed as precise estimates.

Map of Massachusetts showing 15 numbered regions for the 1990 Census. The regions are: 1. Berkshire County, 2. Franklin-Hampshire, 3. Hampden County, 4. Northern Worcester, 5. Southern Worcester, 6. Northern Middlesex, 7. Lower Merrimack Valley, 8. Southern Essex, 9. Merrimack North, 10. Merrimack South, 11. South West, 12. South Middlesex, 13. Bristol, 14. New Bedford, Cape Cod, & the Islands, 15. Plymouth.

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